STATE OF WASHINGTON

REPORT

OF

Washington State Board of Health

UPON

HOUSE BILL 211, OF THE ELEVENTH LEGISLATURE, 1909

RELATIVE TO THE

ESTABLISHMENT OF A SANITORIUM FOR THE CARE AND TREATMENT OF INDIGENT CONSUMPTIVES

OLYMPIA, WASH.
E. L. BOARDMAN, PUBLIC PRINTER
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SUGGESTIONS FOR READERS

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As this report is intended to serve several different classes of readers, in order to facilitate reference, we wish to point out that the report is arranged in four distinct parts:

I. An "Abstract" which gives in a few words the gist of the Board's conclusions. This is intended for those who have no time to read more.

II. The "Summary and Conclusions" with a specific report on House Bill 211 of the Eleventh Legislature. This gives the present attitude of the Board and states conclusions, points out some of the questions unsolved, and gives four definite recommendations.

III. The body of the report. Here the Board has gone somewhat into detail and gives the reasons from which it was led to make the conclusions contained in the summary. Anyone who wishes to obtain any adequate conception of the main features of the tuberculosis problem will find the body of the report indispensable.

IV. The "Appendices." Here are collected certain data and illustrative laws which would be cumbersome in the body of the report, but are of great service for illustrative purposes.

The statistical data is peculiarly interesting, as it illustrates several important points in regard to our own tuberculosis problem that does not hold good generally elsewhere. Noteworthy points are:

1. The low average death rate for the state in both consumption and all forms.
2. The relatively high rate from other forms than consumption.
3. The difference in first-class cities and in the rest of the state.
4. The difference in death rates between those portions of the state which are to the east and the west of the Cascade mountains respectively.

ABSTRACT

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The Board reports specifically upon the applicability of House Bill 211 of the Eleventh Legislature, providing for a State Sanatorium for Tuberculosis. The Board finds five (5) specific objections to the bill as it was first prepared.

Then the Board proceeds to give its conclusions, which are:

That the state has a social and economic duty to perform in relation to the tuberculosis question. That the educational campaign should be extended.

That an *efficient* system for the notification and registration of consumptives is our most needed forward step at the present; and that such an act should be passed at the present time.

That all general sanitary reforms and improvements will help mightily in the struggle against tuberculosis, and that for this reason, as well as many others, every state and community should forward such sanitary advancements.

That the late stage, or dying case of tuberculosis is the most serious.

That sanatorium treatment of early cases is not so important as the care of the above, and should come second. That it is necessary to treat far-advanced cases reasonably near home. That early and advanced cases should not be handled indiscriminately in the same institution.

That institutions for early cases should be primarily teaching institutions.

That tuberculosis cases of the far-advanced type should not be treated in general hospitals, nor left at county poor farms, where they are almost certain to infect others.

Then the Board brings forward no less than thirty (30) distinct though related questions relative to the institutional handling of tuberculosis, none of which the Board feels qualified at present to definitely answer affirmatively; and therefore, in order to enable the state to go into the "tuberculosis business" in a more intelligent, economical, and comprehensive fashion, the Board recommends the appointment of a commission with sufficient funds to properly carry out its investigations, which commission shall report upon an "all-round" plan for the handling of the tuberculosis question at the next session of the legislature.

REPORT

ON THE

Special Bill, Together With Summaries and Conclusions Upon the Tuberculosis Situation in the State of Washington.

Report on the Special Bill, Together With Summaries and Conclusions Upon the Tuberculosis Situation in the State of Washington.

To the Honorable Senate of the Twelfth Legislature of the State of Washington:

The State Board of Health, to whom the Senate of the Eleventh Legislature referred House Bill No. 211, has carefully considered the same and has the honor to report as follows:

This bill has, in the opinion of the Board, the following objections:

First. It creates a special commission for the control of this institution, and the Board believes it would be wiser to follow the custom heretofore existing in this state and leave the control of the institution with the State Board of Control, if the institution is meant for the relief of persons suffering with tuberculosis; or if the object of the institution is primarily that of sanitary instruction, then the institution should be under the control of the State Board of Health.

Second. The bill authorizes certain patients to pay into the institution an amount to be fixed by the commission for their maintenance while at said institution, and requires that the funds so received shall be deposited monthly with the State Treasurer, to the credit of the institution. While possibly by inference this may mean that these funds are immediately available for the maintenance of this institution, we believe the bill should specifically authorize the expenditure for such maintenance, and thus obviate any possible question.

Third. The balance of the appropriation left, after allowance made for the purchase of site and constructions of building, would not be sufficient to maintain the institution during the fiscal period, unless the funds received from the patients were utilized, as from our investigations we are satisfied the cost of maintenance would average from twelve to fifteen dollars per week for incipient cases, and more for advanced cases.

Fourth. The amount of money, twenty-five thousand ($25,000) dollars, designated as the limit for the purchase of site and the construction of buildings, is not sufficient to provide an institution with the necessary administration buildings and quarters for employees and patients, to accommodate more than from 20 to 30 incipient cases —if it is designed solely for incipient cases—or more than 10 to 15 late stage cases, if intended for that character of cases. And this would

not, to any adequate extent, provide either for relief or sanitary education according to the needs of the state.

Fifth. Practically all who are experienced in sanatorium and hospital treatment of the tubercular, are agreed that it is not wise nor practical to treat the incipient and the advanced cases in the same institution, and we believe that the bill should specify which class of cases this institution is to be designed to accommodate.

All of these objections can be met by appropriate amendments, which we believe should be made before the bill is passed.

The Board further believes that the object of the Senate of the Legislature of 1909 in referring this bill to the State Board of Health was that this Board should lay before the Legislature of 1911 all the facts concerning state institutions for those afflicted with tuberculosis that might be known to the members of the Board, and, therefore, we take this occasion to lay these facts before you.

Summary and Conclusions of a Report by the State Board of Health to the Twelfth Legislature, Relative to the Functions of the State in the Problem of Prevention and Relief of Tuberculosis.

This Board, as indicated in its biennial report, has not tried to avoid its responsibilities in this matter. The subject has been kept constantly before it, and the executive officers of the Board particularly have studied carefully all the available literature on this subject, have made special visits to institutions in other states, and have conducted considerable correspondence with other states for the purpose of obtaining all the information possible upon this important problem.

The Board, after mature deliberation, does not feel qualified, nor does it feel that it should be expected at this time, to make permanent and definite recommendations covering all the different phases of this question. The whole subject of tuberculosis, and particularly the public institutional treatment thereof, is one of very great complexity. Also we believe that it is one of the most important medical, social, moral and economic problems that confronts the American people today. The responsibility for conducting a successful warfare against this greatest of human foes cannot be avoided, nor do we believe that any state or community should seek to avoid it.

Useful and beneficient as private institutions, voluntary, charitable and educational associations and private philanthropy are and have been in the past in the struggle against this disease, nevertheless, we believe that all such agencies and means are to be considered merely as expedients in the solution of the tuberculosis question, and that eventually any successful solution of the tuberculosis problem must be brought about by the united and intelligent effort of the entire public, working towards one common aim, working under a system which will avoid, as far as possible, all waste and conflict of effort, and we do not believe that such a campaign can be conducted success-

fully except through the regular agencies of national, state and local governments. We wish to reiterate at this point that this question is in many of its aspects somewhat beyond the province of this Board, and, therefore, we feel that at the present time we can only make the following deductions from our study of the tuberculosis question, and from these deductions we make a certain number of recommendations.

We are convinced that certain measures, or efforts, should be vigorously extended, namely—

1. That the educational campaign, such as this Board has been conducting for the last two years, by means of its educational exhibits, lectures, etc., should be most vigorously continued and extended. Particularly that this Board should be enabled to distribute much more largely than has been the case in the past, pamphlets of an educational nature dealing upon the tuberculosis question.

2. That an efficient system of notification and registration of consumptives is the absolutely necessary basis for the wise future planning of the institutional care of consumptives, and in itself is one of the most efficient means of prevention of this disease, through the closer co-operation on the part of the general practitioner and the local health authorities, and the measures of home education which can be put in force through the practical workings of an effective act of this nature.

3. The extension of all the activities of this Board and the local health officials, and all other departments of our state, county and municipal governments, which tend towards the bettering of general sanitary conditions, particularly with reference to conditions of housing and employment.

We are convinced, as we have said in the biennial report of this Board, that up to the present time, in spite of brilliant victories won against tuberculosis through direct means, that the greatest factor in the remarkable reduction of the death rate from this disease has been the general improvement of sanitation and of public and private hygiene during the last half century. We confidently predict that any measure of sanitary improvement or reform vigorously carried out by any community, will after the lapse of a few years continually yield returns in the form of a permanently lowered death rate from tuberculosis.

The subject of institutional care of tuberculous persons presents so many problems and such divergence of opinion as to the most effective and economic means to be employed in order to obtain a maximum of results, that at present we will only present the following conclusions, and for the reasons therefor we would respectfully refer you to the body of this report.

1st. We are convinced that the far advanced, indigent case is the greatest spreader of this disease, and, hence, any plan for the control and suppression of tuberculosis must fundamentally contemplate the effective handling, and where necessary, the absolute segregation of these dependent, helpless, far-advanced consumptives.

2nd. That the sanatorium care for the incipient consumptive, while very important, and although having to its credit a large and ever-increasing list of victories over this disease, is nevertheless of secondary importance when contrasted with the care of the advanced patient.

3d. That the incipient, or early case of consumption, is not himself, in a great majority of instances, a dangerous spreader of the disease, and, hence, is not such an immediate menace to the public health while he remains in that stage of tuberculosis.

4th. That any scheme which contemplates the furnishing of sanatorium accommodation for each and every incipient case of tuberculosis in the state, which might justly be entitled to such sanatorium accommodation, is not under our present conditions practical, from either a medical, financial or sociological standpoint.

5th. That eventually this state should have one or many institutions, according to the administrative unit which may seem best to adopt, for the care of incipient cases of tuberculosis, but such institutions should be primarily teaching institutions, and their aim should not be first of all the cure of the patient, but rather imparting sanitary instruction to the patient in the manner of life necessary to lead to obtain a cure for himself, and, at the same time, prevent spreading infection to his fellows.

6th. That any attempt to segregate the far-advanced cases in any locality or localities, which necessarily involves a long journey from home in a great majority of cases, is inadvisable for many reasons which are discussed in the body of this report.

7th. That far-advanced cases of tuberculosis should not be handled at county poor farms nor in general hospitals.

8th. That the far advanced and incipient cases of tuberculosis should not be treated indiscriminately in the same institution, but that segregation of the two types of cases upon either a geographical or administrative basis should be thoroughly carried out for many reasons, some of which are touched upon in the body of this report.

9th. That there are a great number of questions that must be faced and answered in a positive fashion by any state or community which is attempting to carry out comprehensive measures for the control and suppression of this disease, and upon which the Board does not feel qualified to give definite recommendations at the present time. Some of these questions are as follows:

By whom should institutions be built? By the state or local community? Should one type be built by the state and others by local communities?

By whom should the expense of maintenance of such institutions be assumed?

Should the state subsidize either the construction or the maintenance, or both of these sources of expense, in the case of institutions erected by local communities?

Should each county be required by law to provide for its own indigent tuberculous population? And if so, to what body should the authority be given to see that such measures are efficiently carried out?

Should adjacent counties, or counties and cities be authorized by law to enter into co-partnership agreements in the building and maintenance of tuberculosis institutions?

Should forcible segregation of the "unteachable" consumptive be legalized? If so, should the enforcement of such acts be placed in the hands of state or local authorities?

Should the state or local communities maintain farm colonies, etc., for the benefit of arrested cases of tuberculosis, where they may be taught such outdoor trades and occupations as would best place them in a position of independence, and, at the same time, guarantee the best possible prospects of a continuance of life?

Should there be a separate institution, or institutions, with school facilities attached thereto, for pulmonary cases in children?

Should the segregation of consumptives in different stages of the disease, to be carried out by a geographic separation of the two types of institution? Or is, as maintained by many authorities, the administrative segregation of consumptives in the different stages in the same institution sufficient to procure results?

Is the segregation of the sexes, as some authorities have been led to believe from practical experience, in the incipient and moderately advanced cases at least, of greater practical and social importance than a strict attempt at segregation according to the different stages of the disease?

Are such institutions as local dispensaries practical and feasible in our state?

What should be a reasonable cost of construction per bed for both sanatoria and hospitals for advanced cases in this state? Should there be a statute limiting the expense of such institutions per bed?

What is the total bed provision for consumptives that is actually needed at the present time in this state? And more especially, what is the total bed provision needed for the advanced cases?

What extension should be planned for in order to adequately provide for the near future?

Should the control of such institutions, when built, be vested in existing bodies or should separate bodies be created for the handling of this problem, at least in as far as the state comes into direct relationship with the problems of institutional ownership and management?

Who should decide upon the admission of cases to the various institutions?

Should the state subsidize institutions already in existence, or that may be built by either local communities or private philanthropic associations, for the care and treatment of other types of tuberculosis than tuberculosis of the lungs?

Should the state subsidize private institutions that are conducted for the care of pulmonary tuberculosis in any stage?

What provision should be made for the admission of cases who are able to pay their own expenses at public institutions?

Should the state require provision to be made for open air schools for such children as are debilitated for any cause, and hence, more likely than the average child to infection with tuberculosis?

Should the state guarantee financing either in whole or in part all such agencies as state or local associations for the general education of the public in the prevention of tuberculosis, or visiting nurses and social workers, for the purpose of better instruction of the tuberculous individual in his home?

And, lastly, when any or all of these questions are answered, what should be the best policy for financing the same?

In view of all these problems, and because we fully realize that the tuberculosis problem is not merely a medical question, but is equally an epidemiologic, hygienic, economic, social, financial, educational and moral problem, and because the Board believes that a careful study of results from the methods employed in other states may enable this state to avoid much lamentable waste of effort and of funds which has occurred elsewhere, through ill directed and poorly adjusted plans of action, and, on the other hand, because it is equally the opinion of the Board that the mere fact that any measure, or set of measures, has proved successful in other sections of the country, is no guarantee that the same methods would be applicable to our own local needs and conditions. The Board believes that in the long run the State of Washington will make more rapid headway in the solving of this question, if the state enters the field with a clearly thought out, definitely planned scheme for the control and care of this disease, than it can by hastily precipitating itself into the field of institutional control of tuberculosis. Therefore, the Board would recommend that the present Legislature pass an act authorizing the Governor to appoint a commission to investigate and report to the next Legislature upon a system of caring for tuberculous patients by the state and local authorities, which investigation shall not be limited strictly to the question of institutional care, but shall investigate the subject from all sides and aspects; that members of the said commission shall serve without pay, but that a sum of not to exceed $3,000 shall be appropriated from the general funds of this state, for the purpose of reimbursement of the necessary traveling expenses within the state, and for such clerical, documentary or other assistance as they may deem necessary, and particularly that whatever proportion of this money the commission may deem wise to devote to such a purpose may be expended on the necessary traveling expenses of any member or members, representative or representatives of this commission outside of this state.

And the board would respectfully suggest that such a commission shall be comprised of the commissioner of health and one other member of the State Board of Health, in order that they may represent particularly the epidemiological and general sanitary aspects of this problem; of a member of the Washington State Medical Society, since the medical profession is brought into more intimate contact with this disease than any other profession; of the State Labor Commissioner and a representative of the State Federation of Labor, since the labor-

ing class is more vitally interested economically in this problem than any other class in our commonwealth; of a representative of the State Federation of Associated Charities, to represent the sociological aspects of the problem; of a representative of the voluntary associations for the study and control of tuberculosis which are now in existence in the state, and of a member of the State Board of Control, in order that the commission may have the benefit of his experience, particularly on the financial aspects of the state institutions.

And feeling that certain measures are, without question, wise and just and beneficial, we would further recommend that the Board be given ample means to carry on and extend its educational campaign, and that the subject of instruction in rudimentary hygiene and sanitation for the prevention of disease, with particular reference to tuberculosis, should be most vigorously extended in our public schools.

That a notification and registration act, along proper lines, should be enacted at once, with sufficient appropriation to insure being carried out effectively, and that our present act of notification of tuberculosis should be repealed.

That the powers granted to health officials for the purpose of improving general sanitary conditions in our state, particularly with reference to conditions of housing and employment, should be extended and amplified, and your body should consider most carefully legislation which may be introduced along these lines, with particular reference to the connection between such measures and the prevention of the disease.

Edwin L. Kimball, *President.*
Wilson Johnston,
James R. Yocum,
P. Frank,
S. B. Nelson,
Elmer E. Heg, *Secretary.*

REPORT ON TUBERCULOSIS

WASHINGTON STATE BOARD OF HEALTH

1910

The Statistical Data Available as to the Prevalence of Tuberculosis in the State of Washington.

The first point to be ascertained in the investigation of any problem, whether public or private, is its size. In other words, how many tuberculous individuals are there in the State of Washington at the present time? We have no exact means for determining the answer to this question.

It is important to bear in mind that the disease "tuberculosis" may attack any part of the body, and that tuberculosis of the lungs, or pulmonary tuberculosis, or consumption, as it is variously called, is only one of many types of the disease. However, pulmonary tuberculosis always arrests our attention more markedly than the other types both because it is more common, and because it is usually considered far more dangerous to the public health. The Board wishes to emphasize that the other forms of tuberculosis than pulmonary are in themselves a very serious cause of death and account for a higher percentage of the grand total of tuberculous deaths than is commonly realized. In Washington for the past biennium there were 1,768 deaths from pulmonary tuberculosis, and in the same length of time there were 546 deaths from the various forms of tuberculosis other than pulmonary; or, practically, 23 per cent. of the total tuberculosis death rate is due to deaths from non-pulmonary forms.

The death rate from the non-pulmonary forms is increasing in this state at the present, while the rate for pulmonary tuberculosis is falling. The Board has not sufficient data at hand to be able to even hazard a guess as to what these figures really indicate, but it is at least suggestive that coincident with the increase in the death rate from the extra pulmonary types of tuberculosis, the State Veterinarian should report an increase in the frequency of bovine tuberculosis in our dairy herds.

The general death rate for the state per hundred thousand population has been as follows for the past three years: For 1908, pulmonary tuberculosis, 85.39; for 1909, 83.23; for 1910, 78.28. For other forms of tuberculosis: For 1908, 19.8; for 1909, 21.61; for 1910, 27.93.

These figures are very striking and deserve very careful investigation to determine what is the cause of this tendency towards increase in forms of tuberculosis other than tuberculosis of the lungs. Comparison of these figures with those of other states in the registration area demonstrates that Washington stands almost alone, as far as present figures are available, in this respect. Thus, in the sixteen other states in the registration area there is shown either a constant de-

crease in the death rates from all forms of tuberculosis other than pulmonary, or a practical standstill. In only three other instances does there seem to be a tendency, such as exhibited in this state, of a rising death rate from these forms of tuberculosis other than pulmonary. We would not lay too much stress upon this comparison, since it is only possible to compare the last three years' record in this state with the records from 1904 to 1908 inclusive in the other states, but we believe the general tendency will hold good down to the present time. It will be borne in mind that, as a rule, in discussing tuberculosis in this report, pulmonary tuberculosis is meant, unless otherwise specified. However, for the sake of clearness we will try to use the term pulmonary tuberculosis when this form is intended.

Some of the general statistics of the country at large may be of sufficient interest to quote briefly at this point. It is estimated that between 150,000 to 200,000 die from tuberculosis from the various forms every year in the United States alone, and that somewhere between 500,000 to 1,200,000, according to various estimates, are continually afflicted with this disease. In spite of this appalling showing, it is comforting to reflect that our present figures indicate a decrease of 48 per cent. over the rate of 1880. In other words, they mean that if the disease prevailed today at the same rate as it did throughout the United States in 1880, instead of 150,000 to 200,000 deaths annually in the United States, there would be from 250,000 to 300,000 deaths. In spite of this brilliant showing, the report of the Committee of One Hundred on National Vitality rates consumption as a disease which should be preventable to the extent of not less than 75 per cent. of the present rate, by simply adopting reasonable precautions, or, in other words, after leaving ideal methods and facilities, which should theoretically and practically eradicate the disease, entirely out of consideration.

Having briefly discussed what is meant by the term tuberculosis, and its general extent in the United States at large, we are more directly interested in this state with trying to solve the question asked in the beginning of this section—how many tuberculous individuals are there in this state? It is well to emphasize once more that absolutely accurate information on this subject will be impossible for some years to come, yet for the purpose of practically dealing with the subject, it is at least necessary to have some approximations which we can depend upon as reasonably correct. Data can only be collected by means of an efficient notification and registration act, such as has been discussed in another section. There are several methods of estimate which are liable to wide margins of error, but will give, at least, an approximate answer to the question. Most of these estimates are based on the mortality figures, but they vary considerably in their results. One of the most careful of these methods is that of Phillip, of Edinburg. Phillip states that he is convinced that nearly all of the current calculations as to the prevalence of tuberculosis have erred on the small side. He estimates the number of tuberculous individuals in any given community by taking the number of deaths from tuberculosis and multiplying by ten. Using these figures for a basis, results indicate

there are approximately 12,000 tuberculous individuals in the State of Washington, since the total number of deaths from tuberculosis for the past year was 1213.

Another method is that of attempting to take a tuberculosis census of certain communities by making a house to house canvass, and then averaging the ratio between this census and the tuberculosis death rate of several scattered communities and applying the result as an approximation for the state. This method, of course, is open to many obvious errors, but, nevertheless, is very suggestive. This was carried out in detail in four communities in the State of Massachussetts for the year 1909.

Without going into the details of these investigations, we may say that the Massachussetts figures indicate that for each death reported there were from six to seven cases of tuberculosis of all forms. It is, of course, admitted that this estimate does not make allowance for cases in which a diagnosis has not been made, nor for the possibility of understatement of tuberculosis deaths, because of faulty death returns. Thus, as pointed out by the commission, in summing up of these estimates, that the accuracy of mortality returns in regard to tuberculosis can be seriously questioned in many communities, because a certain number of mistakes in this respect are made, and especially because there is a strong tendency to evade using the term "tuberculosis" in any form on a death certificate, for various reasons. It is the opinion of this Board that this tendency does not exist as markedly in this state today, as appears to be the case in many eastern states. We believe that physicians, as a rule, are making an honest attempt to return every case of tuberculosis as such upon their certificates of death. But assuming, for the sake of argument, that the ratio of living cases to deaths in this state is approximately the same as that of Massachussetts, such a calculation indicates that there are from 7,000 to 8,000 cases in the state. There are many other factors which we do not know for certain, which might modify these estimates to the extent of several thousand cases either way, which are at present at work in our state. There is the possibility that the average duration of life for a progressive case of tuberculosis is much less in the West Pacific Slope than in other portions of the country. At any rate, this contention has been made by some observers, notably Hutchinson (Note. See report of the National Association for the Prevention of Tuberculosis). It is true that these conclusions have been strongly disputed by many other observers in the Pacific Northwest, yet the possibility of its truth must be borne in mind in estimating the total number of cases in a state. It is, of course, evident that if the average duration of life in the tuberculous individual, from the time he began to show signs of the disease, is from three to four years in most sections of the country, and only from one and a half to three years in the West Pacific Slope, as is contended, that any estimates in regard to the prevalence of the disease based upon assumed ratio of morbidity to mortality, which ratio in turn has been derived from studies of tuberculosis made in regions where the average duration of life is much longer than in our own

state, would, of necessity, lead to very erroneous conclusions in regard to the total number of cases existing in this state at any one time. But of much more importance than this point is a consideration of the probable bearing that the immigration and emigration of consumptives has upon the permanent tuberculosis population of our state.

There are many other factors which must be considered, such as the total percentage of population dwelling in cities, and the sanitary conditions of our cities, particularly the overcrowding of tenements and lodging-houses, as contrasted with conditions in eastern cities. We know the world over, tuberculosis has been found to be most prevalent in the slum quarters of large cities. Roughly speaking, we may say to all intents and purposes, that the "slum sections," as it is known in eastern cities, does not exist within the borders of our state. Probably largely on this account, as well as the fact that our percentage of rural population is higher, also partly because our climate is such as to allow living in the open air for a greater portion of the year, but probably far more important than any of these factors, the fact that the tremendous increase in population in this state during the last decade has been the immigration of strong, healthy, young adults, the State of Washington today is fortunate in that it has a death rate from tuberculosis which is among the lowest recorded for any civilized community in the world. While we may feel proud of this low showing, the fact itself should not be considered as a good excuse for sitting idly by and assuming that the state has no need to enter actively into the tuberculosis problem. A little careful reflection will, we think, convince anyone that this present showing should be a greater stimulous for further work. In the first place, it would be a splendid record for any community to show, if we could by any possibility, a lower death rate in the next decade. On the other hand, it is very necessary that we should ask ourselves what part of this splendid low tuberculosis death rate is due to such permanent factors as climate and environment, or if to active measures taken by the people of the state against this disease. Up to the present time this second query can be answered largely in the negative. We have no right to assume that any considerable proportion of our low tuberculosis death rate is due to a deliberate exercise of anti-tuberculosis measures by the organized governments of our state.

Another query to be raised is that just discussed in the previous paragraph. What part of this favorable death rate is due to the mere accident, regarded from the standpoint of public health, of immigration of healthy, robust citizens?

The rather disturbing conclusion that we are forced to draw from a consideration of these three queries is the following: If the immigration of healthy people is alone or in an overwhelming measure responsible for our present low death rate, then, unless favorable climate and enviroment and the enlistment of active anti-tuberculosis measures continue to exert an increasingly favorable influence upon the tuberculosis death rate, then by the inevitable workings of the economic law, viz., that immigration into any considerable area of country will progres-

sively lessen, as that area becomes more and more populous, this state will be placed during the next decade in the unenviable and almost unique position of a highly civilized modern community with a rising tuberculosis death rate due to the relative increase in the frequency of the disease among its own citizens.

AS TO THE ECONOMIC COST OF TUBERCULOSIS—A PREVENTABLE DISEASE.

There is always room for wide divergence of estimates whenever an attempt is made to put down in dollars and cents the cost of tuberculosis. There are three different angles from which this subject may be considered.

1st. The actual cost of measures inaugurated by states and different communities against the disease; that is, the amount of money expended on educational campaigns, institutions, etc.

2d. The estimated cost of the disease in the form of actual losses to the tuberculous individual from the time of taking sick until death. It is usually customary to figure in these estimates the loss of wages as well as the actual expenses incident to sickness.

3d. The broader method of estimating, not only such factors as have already been discussed, but also the cost expressed in terms of average economic value of life at different ages. Many ingenious and surprising calculations have been made upon this point. Some of the best of these are those collected by Fisher in his article upon the cost of tuberculosis in the United States. Space does not permit going into details at this point, but his conclusions are that if we estimate both the direct loss by illness and the potential loss due to the loss of capitalized earning power, according to the methods usually used by authorities on the value of labor power, we find that the average cost for each death means an actual money loss or money waste to the state of at least $8,000.00, of which approximately $2,500.00 occurs in the illness preceding death and $5,500.00 is the estimated potential value of the life itself. However, it can be readily argued that the loss from earnings is simply a loss to the dying consumptive himself and not to the community, whereas the other losses certainly have to be borne by the community as a whole in the long run. Applying these figures from the estimates made by the United States Bureau of Labor, we find that practically $3,200.00 for each death is the average loss to the surviving members of society and not to the consumptive himself. This sum represents the sum an average consumptive's life should have been insured in order to indemnify the rest of the community for the economic loss occasioned by his death. Applying these figures to the country as a whole, Fisher estimated that two years ago the monetary loss due to tuberculosis to the consumptives themselves was over six hundred and sixty million dollars, whereas the loss to others than the consumptive exceeded four hundred and forty million dollars, making a total annually to the nation of $1,100,000,000. As he says, if this annual loss should continue indefinitely, it would represent an offset or a reduction from our annual resources of twenty-two billion dol-

lars. These figures are the minimum measure of that part of the causes of tuberculosis which can be expressed in money, and he goes on to point out that if only one-fourth of the lives now lost could be saved, it would mean an annual saving of seven hundred and twenty-five million dollars to the United States. When these aspects of tuberculosis are considered, it is easy to see why, even allowing the expenses of institutions to be tremendous, it is still possible to make a good argument that it will economically pay to try to save or at least prolong the usefulness of such patients. Applying these figures to our own state, we may safely assume that our proportionate loss is not more than 1-100 of the total for the United States, for while our population exceeds 1-90, yet our tuberculosis rate is relatively lower than the country as a whole. On such basis this would give us a total annual loss of approximately ten million dollars from this disease. If State of Washington, Debtor,

it be contended by some that it is not fair to compute the potential value of earning power, although this is precisely what is done in all estimates of economists and by the United States Bureau of Labor, and the question is pinned down to the conservative estimate of considering only the average losses up to the time of death, we could even then make out an account against the State of Washington which should read something in this fashion:

State of Washington, Debtor,

To acct. Preventable Tuberculosis, 1910.

Item 1.	Number of deaths from tuberculosis	1,213
Item 2.	Fatherless homes	300
Item 3.	Motherless homes	400
Item 4.	Homes without either parent	150
Item 5.	Orphans	400

LOSS IN DOLLARS AND CENTS.

Item 1.	1,200 lives at an average economic value of only $2,000.00 each	$2,400,000
Item 2.	Average cost of extra expense other than doctors' and druggists' bills for each case of illness, at $60 each	72,000
Item 3.	Doctors' and Druggists' bills, at an average cost of $90 each	108,000
	Total	$2,580,000

All such figures as these are only approximations and any such data can be halved, doubled, trebled or quadrupled, simply by allowing different values, all of them perhaps reasonable for the different factors considered, or by the admission or exclusion of different factors. But all such conclusions inevitably lead to the conclusion that the economic drain upon the resources of the people of this state, in common with the rest of the civilized world, because of the prevalence of this largely

preventable disease, is at the present time simply enormous, and in dismissing the consideration of this subject itself, we will say that it is well to bear in mind that all such figures as these make no attempt to compute in dollars and cents any of the items which must be charged under the heading of needless pain and suffering, mental anguish on the part of the patient, or of the apprehension and worry and care on the part of his family. All of which factors must not be forgotten in any true estimate of the losses from this disease.

As to the Efficiency of General Sanitary and Preventative Measures in the Control of Tuberculosis.

The Board does not feel that it can at this point go into detail upon this most important aspect of the tuberculosis problem. It is a notable fact, nevertheless, that general sanitary and preventative health measures everywhere yield good returns in the form of diminished rate of prevalence of tuberculosis. The importance of this aspect is so great as to deserve practically a special report in itself, and it is most unfortunate that it is so little appreciated by the general public or even by the medical profession. Many of the pessimistic members of the medical profession who are so frequently quoted as expressing their belief that tuberculosis is as fatal today as it has ever been in the past, in spite of all the stir and popular agitation that has been made over the subject in the past few years, would be greatly astounded, as well as enlightened, if they could only be induced to make a careful study of the actual statistics of this disease for the last 50 years in communities where their reliability cannot be questioned, and note how uniformly improvement in sanitary conditions has gone hand in hand with the decline in the tuberculosis death rate. General improvement in sanitary measures always works in two directions, but both equally to the improvement of the tuberculosis death rate. First, the inauguration of such measures tends to diminish the opportunities for infection. Probably it is safe to state that no single factors have gone further to bring about a reduction in the tuberculosis death rate, than these two, at least in our larger cities.

(a) A certain general improvement in the housing conditions of the laboring classes, which has resulted, as a rule, in a much more common utilization of a separate bedroom for any sick member of the family at least, and so that an increasing number of families can lift themselves year by year from the condition of one-room tenements to two-room tenements, from two-room tenements to three-room tenements, has a tremendous and little appreciated effect upon the death rate from tuberculosis, in that each move diminishes the opportunities for infection in geometrical proportions.

(b) The other factor mentioned, is the general extension of sewers and insistence upon toilet connections with these in every portion of our large cities. At first sight this may seem to have but slight direct bearing upon the question of tuberculosis, but when we reflect that one of the most important factors in preventing tuberculosis is an early and

efficient disposal of the infected sputum, and also that general introduction of sewerage facilities renders a sanitary disposal of sputum infinitely easier, it is easy to understand why such an item as the extension of sewerage facilities renders a sanitary disposal of sputum infinitely easier, it is easy to understand why such an item as the extension of sewerage facilities has apparently brought about, with other factors unchanged, a marked diminution of the tuberculosis death rate in many cities.

The other manner in which such improvement and general sanitary conditions tend to decrease the death rate, is that such improvements tend to increase the individual resistance to the disease by an increase in the general health.

Of special importance in this regard is the improvement of the sanitation of home and place of work. Some of the measures by which the community generally benefits, are such things as improvement of building laws; requirements of light and sanitary arrangements; the regulation of hours of labor, particularly of women and child labor; the guaranteeing of a pure water and milk supply; proper disposal of sewage and garbage; supervision of employments which are particularly dangerous to health; pure food laws; prohibition of overcrowding of the tenement districts; the better provisions for public comfort; the general improvement in the wage rate, all effect the death rate from tuberculosis. Any measures directed towards the betterment of the general health and recreation of the public, particularly such as tend to get people into the open air, are to be encouraged as extremely helpful against tuberculosis. The extension of parks, playgrounds, inauguration of public baths, encouragement of helpful out of door exercises, such as the increased cheapness and abundance of electric transportation, all tend to promote the resistance to tuberculosis.

There is one item which has received a great deal of attention and discussion in the past, and which everyone admits would be of great assistance in the checking of the spread of tuberculosis, and that is the abatement of the nuisance usually known as the spitting evil. Anti-spitting laws have not been the success that was at once anticipated for them, for two reasons. First, because the public has not been educated to the point of insistence upon the observance of such laws, and second, because as yet our laws only too generally stipulate in detail why the public should not spit, but fail to make any suitable provision for sanitary facilities for the reception of sputum when spitting is an absolute necessity.

In closing this subject we would like to quote from two officials—one, Mrs. Blanche Mason, assistant labor commissioner of this state. Speaking upon the subject of general sanitation in its relation to tuberculosis, she says: "The regulation of hours of labor, especially of those of women and children, and the insistence upon sanitary environment for our laboring classes when at work, and proper sanitary surroundings in their homes, will do more to prevent and eradicate tuberculosis than the multiplication of sanatoria." The other authority is Dr. E. W. Hope, the medical health officer at Liverpool. In a paper submitted by him

to the International Congress on tuberculosis, which is short and bears entirely upon the important point that tuberculosis is essentially a disease of poverty and ignorance and overcrowding, he says: "Long before the exact nature of tuberculosis was established, its close association with sanitary conditions was well known, but in Liverpool fifty years ago, the importance of tuberculosis as a health problem was completely overshadowed by its (then) more formidable rival, typhus fever, and it was with the intention of suppressing typhus fever, rather than with the expectation of diminishing consumption, that led the municipality originally to contemplate the sweeping away at great cost, of large areas of unwholesome, poorly ventilated, and viciously constructed (streets) blocks. Probably not less than twenty-five thousand of such dwellings have been cleared away and wholesome, airy, sunny tenements have been erected in their place—a work which is in progrss even at the present day. . . . . It cannot be questioned that a large proportion of the remarkable improvement in the tuberculosis death rate has been due to this improvement of sanitation among our working classes. Side by side with this work in more recent years, as the nature of the disease to be combatted was better appreciated, adjuncts to the better ventilation of the city, such as wider streets, gardens, parks, open spaces, etc., have been provided, while personal hygiene has received its facilities from the provision of baths, wash houses, etc., for the poorer classes." Then he goes on to discuss several other factors in the decline of the tuberculosis death rate, of institutional care, etc., and in conclusion says: "These, no doubt, one and all must be classed as accessories of value in the struggle against tuberculosis. That they are of great value is beyond question, but in no case must they be allowed to divert attention from the great public responsibility which devolves upon the government of cities and towns, of efficiently carrying out the intricate operations necessary to bring a city to the highest possible efficiency in sanitation, and it is doubtful if any more encouraging instance of this relationship can be cited than the progress that has been taken in the city of Liverpool."

There are measures of a general sanitary and administrative public health nature which ought to receive careful attention in respect to their relationship to tuberculosis, as the sanitary supervision of such trades and occupations as are notoriously prone to spread the disease. Another measure is that of requiring an examination by a physician of all new employees, at least where the work is inside, such as factory, shop or office, with a view to determining that they are free from any danger of spreading the disease before allowing employees to work in close association with others.

Another important factor in checking the spread of the disease, and one which can, to a considerable extent, be brought under the control of the authorities, is the question of the atmosphere of our large cities. As is stated by the Committee of One Hundred on Nation Health, in their report on national vitality, none will deny but that theoretically every one should be entitled to pure air, which we are wont to consider as free to all, yet, as a matter of fact, where is there an American city

today which does possess a reasonably pure atmosphere? We may search the country over and find not one. Our air is foully polluted, chiefly by smoke, but to no little degree by dust from our city streets, as well as obnoxious gases from certain industrial employments. All of these factors in the pollution of air could be easily either eliminated in toto, or to a large extent abated by means which are within the reach of all civilized communities if only earnestly sought.

On the Needs of an Efficient System for the Notification and Registration of Consumption.

As was pointed out in the last biennial report of your Board, a consideration of this subject is to all intents and purposes practically a consideration of the question of the reporting of tuberculosis as a contagious disease. That tuberculosis is as truly a contagious disease as any of the more acute and rapid contagious diseases, such as smallpox and scarlet fever, is today admitted by all. On the other hand, practical experience has everywhere shown that because it is not a rapidly fatal disease, it is more difficult to obtain adequate reports on these tuberculosis cases. There are many reasons why this must be so—some of the good, and others simply due to lack of care on the part of the physician, and lack of knowledge regarding this subject by the general public. The greatest difficulty in handling tuberculosis as a contagious disease is due to the fact that it is not feasible nor wise to attempt to publicly quarantine or placard by any means, and conspicuously brand a consumptive as one suffering from a dangerous disease and, hence, to be avoided by society at large. From the standpoint of attempting to stamp out the disease by isolating all those suffering from it from the rest of the community, this sort of a procedure would be the correct one, and it is identically the sort of procedure we take in the more acute contagious diseases. But in the case of tuberculosis, there is such a large percentage of society always infected with the disease, that the mere number of persons that it would be necessary to keep under such quarantine would be in itself sufficient to render such drastic schemes impracticable, even though there were no other objections. But in addition to this there is the lack of sufficient appreciation on the part of the general public of the contagious nature of the disease at all, and this in itself is one of our greatest obstacles to our rational handling of tuberculosis cases. Also there is the fact that a large percentage of persons infected with tuberculosis, and often a considerable percentage of those who have progressed so far as to be easily diagnosed by the average practitioner, by merely inspection and questioning of the patient will, nevertheless, spontaneously recover, and do so without at any time showing tubercle bacilli in the sputum, which fact means, according to our present conception of the disease, that such individuals were not at any time, even in the acute stage of the disease, a menace to the public health. Furthermore, a very large percentage of these cases that do not result so favorably are, nevertheless, able sometimes for years to keep about their occupations and do their customary work, with im-

paired efficiency, it is true, but still with a sufficient amount of ability to continue to earn their usual living.

For all of these and other reasons that may be cited, it can be easily seen that tuberculosis in any form, and particularly tuberculosis of the lungs, cannot be isolated and rigidly quarantined as can many of our other contagious diseases, from either a medical, social or economic standpoint. Nevertheless, there are many good reasons why cases of tuberculosis, and particularly tuberculosis of the lungs, should be reported to the health authorities and each case registered. Some of the reasons which can be easily cited in favor of such a registration system, which will gradually work up to the percentage of very high completeness, as is shown by statistics of several of our states, notably Maryland, are as follows:

1st. As complete a system of registration as can possibly be obtained, is a very important foundation for a state to plan intelligently, adequate measures for the care of consumptives, either in public institutions or for care in their homes, by the regular health authorities.

2nd. A registration system is the most practical means by which we can collect a large and important amount of data, which must be taken into consideration by any state which is attempting to adequately handle its tuberculosis problem. Some important data of this nature, which it is important for us to determine for this particular state, are such things as to what localities, what sorts of trades and occupations, what neighborhood, climates, ages, etc., are most affected by consumption in this state, and such data when once collected will serve as a future basis for epidemiological studies, and from such studies wise legislation looking towards the correction of such of these factors as are amenable to legislation and sanitary control can be drawn.

3rd. Such a system is the only means by which we can ever approximately arrive at the important question of what proportion of our consumptives are suitable for institutional care, and as a natural deduction from this last question is the relative one as to how many of the consumptive population is in actual need of financial assistance?

4th. Probably of even greater usefulness than these points just enumerated, is the fact that through the practical workings of such a registration system, more efficient measures can be carried out for the control of the consumptive in his own home. Thus, the general practitioner, from the fact that he is required, in making his report, to go carefully into all the most essential points in regard to the contagiousness of tuberculosis, and to give specific directions as to how the consumptive can prevent spreading the disease, becomes thereby a very much more efficient prophylactic missionary, so to speak, than he is under our present system.

5th. Such an act gives the state the power, through the local practitioner and the local health officials, to at least clearly instruct each consumptive as to the nature of his malady, as to the danger that there is of giving the disease to his family unless he observes suitable and proper precautions. When such is done, the careful, intelligent and un-

selfish consumptive will profit by such instruction and attempt to the very best of his ability to carry them out, as proved by practical experience elsewhere.

6th. It is rather remarkable to contemplate what we know to be equally a fact, both from practical experience elsewhere and in our own state, that a certain proportion of consumptives, even after careful and simple instruction has been given him in regard to the nature of his malady and the danger of infecting his immediate family and friends, is, nevertheless, so ignorant or vicious, or so totally regardless of the rights of others, as to take absolutely no precautions in regard to the disposal of his sputum, or any other measures necessary to prevent spreading the disease. This class has become known among tuberculosis workers as the "unteachable" consumptive, and such a registration system as we now have under consideration is absolutely necessary to discover just who and where these unteachable consumptives are, and thus lead the way to such restraining measures as may be necessary in order to forcibly correct such consumptives and restrain them as a menace to public health.

7th. In addition such a registration act will show a point which is of great importance in this state; namely, how great an effect does the immigration and emigration of consumptives have upon our consumptive population in this state?

8th. And lastly, but probably the most important reason of all for the existence and enforcement of such a registration system, is the fact that a well enforced system of this nature is the only effective way to insure the thorough carrying out of house and room disinfection upon the death or removal of any open consumptives. In other words, consumptives showing tubercle bacillus in their sputum; and the consensus of the best medical and sanitary opinion the world over is to the effect that this is one of our most efficient means of preventing the spread of this disease.

Having considered the needs for efficient registration and notification system, we will now consider briefly the practical steps that will be necessary to obtain such notification and registration in our own state. At the outside we are confronted with the fact that we have already in existence upon our statute book a law relative to the reporting of tuberculosis. The practical workings of this act are reviewed in the last biennial report of our Board, from which we quote the following:

Looking at the matter from another point of view, it is highly necessary for the benefit of the consumptive's associates and society at large, that both he and they should be taught how to prevent the disease from spreading from the consumptive to others. For all these reasons it is highly essential that tuberculosis be reported regularly as a contagious disease, and with this in view, an act was passed by the Washington Legislature, which was approved March 13, 1899, over eleven years ago, covering the most important points of relationship between the state and the individual consumptive. This act provided that all practicing physicians in the cities of the first and second class (subsequently extended by the regulations of the Board to apply to all physicians) report cases of tuberculosis within five days from the time of diagnosis, the report covering the most essential economic data, as sex, age, occupation and

residence. It provided that permanent records should be kept of cases reported, but that such records should never be made public—a most wise provision. It also provided that local boards of health should furnish printed instructions in regard to the proper care of tubercular patients, to see that the premises are kept in good sanitary condition, and that thorough disinfection should be carried out upon each death or removal. This law has now been in force for over 11 years in this state, but has been a dead letter from the first. Records of cases of pulmonary tuberculosis which have been forwarded to the Board up to the present time are only valuable in that they demonstrate, beyond any shadow of a doubt, the absurdity of our present reports and the futility of this act. Thus, in the year from October 1, 1908, to September 30, 1909, we had 1103 deaths with only 271 reported cases. In the year from October 1, 1909, to September 30, 1910, there were reported 498 cases with 1213 deaths, in a disease where the total number of living cases must certainly outnumber the deaths for any given year by at least 5 to 1; while the number of new cases which should be reported each year should be considerably in excess of the deaths, as a large per cent. of consumptives do not die, but recover. The improvement in the number of cases reported for 1910 over 1909 has been almost entirely due to the better reporting in the city of Seattle, through the combined efforts of the city health department and the anti-tuberculosis league and is in itself a striking illustration of the value of such anti-tuberculosis organizations. Thus, in Seattle, for the past year there have been almost as many cases reported as deaths, which showing, while far from ideal, is a remarkable gain over all previous experience.

The great problem before this Board at present is to devise a system by which cases of tuberculosis will be reported by the physicians, and whereby upon receipt of such reports the state can bring into action such agencies of instruction and warning as will tend to keep each reported case from becoming a fresh focus of infection to the general public. The greatest weakness of the old law was undoubtedly in its making cases reportable to the local boards of health. This is a general rule, and a wise one for contagious diseases, but experience has shown that, in this particular, tuberculosis is an exception. The states which have developed the most complete systems of registration of tubercular cases, have accomplished this result by having no intermediary between the practicing physician and the state health authorities, in so far as the reporting of this disease is concerned. By keeping these reports strictly confidential and exempting them from publicity, and at the same time requiring physicians, under moderately severe penalty, to report cases direct to the state authorities, the patient is kept from the morbid terror which is so frequently a great handicap to sane early treatment.

The states which have achieved any considerable degree of success in the important problem of notifying and registering of tuberculous individuals, have nearly all been based in some manner or other upon the so-called Maryland act of registration and notification, and the remainder of the points which we wish to bring out in regard to the practical workings of this act, are largely drawn from quotations of this act and discussions of its practical application by the executive officers of the Maryland Board.

The first point to note is that such an act must be confidential. It might be said in passing, that this very point is probably the greatest reason why our present act has never been a workable or enforcible act. With reason or without, the fact practically always holds good in the incipient consumptive that he has a great horror lest the nature of his

malady become known to his friends and neighbors. Sometimes there is good reason for this attitude, as when the patient is desirous of keeping the bad news for a time at least from his household, and sometimes the question of retaining a position is at stake, but only too frequently it is merely a morbid dread that has no real basis in fact; but while the patient will readily confide in his physician, especially in the smaller towns and rural communities, he often requests the doctor to say nothing to anyone about it, and not infrequently physicians in the past, in this state, have been put in a very embarrassing position and lost the confidence and often the patronage of the patients who happened to be afflicted with tuberculosis, because these physicians proceeded as the law directed and reported the case to the local health office. Then the local health office, through either lack of tact or because the machinery of their system did not allow them to do otherwise, or in the small towns particularly through the gossip of the health officer's stenographer, has spread broadcast the information that so and so has consumption. Therefore it is easy to see how any system to be effective must first of all be confidential. At any rate, at the very beginning, until the confidence of the patient has been thoroughly gained and it has been demonstrated to him that it is far more important for his future well being that he frankly begins to lead the open air life and take such other hygienic measures as are necessary to promote a cure of tuberculosis, than it is to endeavor by every means to suppress the fact of the existence of his disease until the ravages have gone so far that concealment is no longer possible.

As we have already indicated, it is very difficult to maintain confidential relations when the cases are reported direct to local health offices, and for this reason, and also in order that there may be more uniformity in the administration of the act, and that waste in the distribution of supplies be reduced to a minimum, it is highly essential that reports of tuberculosis should come direct from the practitioner to the state health authorities. Then the state health authorities are able to keep a check upon the movement of the tuberculous population. They have in their own offices data which can be utilized with increasingly good results for the purpose of making epidemiological studies referred to above, and the confidential rights of the tuberculous individual are safeguarded in the best possible manner. Any legislation for this purpose should expressly provide that such reports as would give the name, place and occupation of the tuberculous individual, should be exempted from publication, but that the health authorities should be free to use such information for sanitary purposes in any way which they may consider necessary.

In addition, any system to be effective must contemplate the payment of a reasonable fee to physicians for reporting this disease. It may be argued that a physician is already legally responsible for the reporting of such diseases; that he should not be paid for reporting tuberculosis cases any more than reporting cases of smallpox or scarlet fever. But careful reflection and study into this subject will show that the analogy in this respect is far more apparent than real. In the case

of such diseases as smallpox and scarlet fever, we have acute, serious, much dreaded diseases of only a few weeks duration at the most, and upon which public opinion has become educated, through bitter experience for continued generations, to a point where it will not tolerate the general failure of physicians to report such cases, and thereby insure them being properly isolated by the health authorities. But in the case of tuberculosis no such public opinion exists. As a matter of fact, generally speaking, as far as public opinion is at all formed on the subject, it tends rather to encourage the physician in his failure to report. Moreover, a routine report, such as is sufficient for the acute contagious diseases, does not sufficiently cover the ground so as to be suitable for cases of tuberculosis. To be of service for public health work, such reports must cover a considerable amount of data in regard to such points as kind of occupation; whether the patient is still engaged in it; whether earning power is still good; if not, or working at reduced wages; how long, or if totally disabled. Also family history relative to tuberculosis. Then such general data as number of children in the house; number living or dead; young children; if patient is mother or nursing; whether patient habitually utilizes utensils in common with other members in the house; whether patient prepares the food for the family, and a considerable variety of questions upon which data is sought relative to the immediate and final disposal of the sputum of the patient; data in regard to the condition of the room and house; as to whether other people share room or bed with the patient, and a considerable number of other points upon which definite information is necessary. All of these are additional to the usual personal data which is returned on the ordinary report of contagious diseases. In addition to this detailed report of the circumstances of the case, to make such an act effective, a physician is required to make an affidavit that he has truly and thoroughly demonstrated the use of prophylactic supplies, and has explained the nature of tuberculosis and instituted all other necessary precautions considered necessary for the patient to follow, both in his relation to matters of family occupancy of his room and general sanitary conditions of the premises.

As can be seen, this involves a considerable amount of labor and time. It can also be readily seen that careful carrying out of these measures is of immense preventative service to the state, and for all these reasons the Board is of the opinion that for the carrying out of an act of this nature, suitable fees should be paid each physician under such restrictions as would insure the proper instructions before fees are paid. We would suggest that such fees be in the neighborhood of $2.00 for each patient thus properly reported and instructed, and we wish to point out that in such an act the physician is being paid for his service *to the state*, and not primarily for his services to the patient. In other words, the underlying argument in favor of the payment of a fee for such services, is about as follows: Namely, that for such measures of prevention and instruction which the physician has carried out and enforced, for the time and labor that is necessarily involved in carrying out such measures, it is no more than just that he receive a reasonable

fee and, furthermore, that the carrying out of such measures will finally have a direct tendency to lessen the death rate from tuberculosis and that, therefore, the physician has done the state a direct service sufficiently great in importance to deserve special remuneration.

Another essential of such a system is that it must in itself, by its practical workings, tend to prevent tuberculosis. Any act which fails to do this must be considered as a very imperfect success, however much the number of cases that are reported increase and become valuable for statistical data. In the last paragraph it has been pointed out in detail that the careful instruction which the physician must give before he is entitled to his report fee, is in itself one of the ways in which such a system will tend to prevent tuberculosis. In addition to this, such an act will tend to prevent tuberculosis if it tends to stimulate the interest of the patient in his disease, and at the same time make him feel that he is not to be left unassisted in his struggle, but that the state is standing back of him with moral support. And in the case of indigent tuberculosis patients, at least, such interest can only be stimulated by furnishing the patient with some tangible evidence of the state's interest in his case. In the case of Maryland, this is furnished by a certain package of supplies which will serve as a prophylaxis against the disease. These supplies are furnished for a period of three months, upon application of the family physician or local health officer, for indigent cases. They consist of 75 paper sputum cups, one bottle of disinfectant, two water proof packets for insertion in the coat pocket, 200 paper napkins, 1 metal cup holder, which is expected to be issued only once, and one information book. These supplies have averaged in the experience of Maryland, $.66.9 in cost every three months, or approximately, $2.65 per year per patient reached.

As a practical result it is worth while to note at this point the death rates from tuberculosis in Maryland from 1905 to 1908. (Figures for 1909 and 1910 are not yet available). Per hundred thousand of population, the rate for 1906 was 180.6; 1907, 177.7; 1908, 173.9. Unfortunately, the United States census reports are not available for any years except up to 1908, but we are assured by the secretary of the Maryland Board that the death rate has continued to show a decrease up to the calendar year of 1910, for which year we have not as yet received any information. This remarkably steady decrease in the tuberculosis death rate has occurred in spite of the fact that an increasing amount of care has been exhibited by the physicians of Maryland in returning deaths from tuberculosis in such form that the tuberculous nature of the disease was manifest upon the death certificate. Therefore, we are safe in concluding that in Maryland the tuberculosis death rate is constantly falling, although the population is continually increasing, and the physicians are making more and more reports and fuller reports on the tuberculosis death certificates. This would indicate a very marked reduction in the prevalence of the disease. It is equally true that Maryland has taken a very active interest in the tuberculosis question, and the state supports some of the finest institutions for the care of those suffering from tuberculosis than anywhere

existing today. Yet it is the opinion of the secretary of the Maryland Board, carefully expressed in his public utterances, with all due caution and reservation, that it is safe to state that the death rate has declined very substantially in the state of Maryland every year since the enactment and enforcement of such a registration act, where previous to that time the death rate had been almost stationary. He goes on to state, and we quote his exact words:

Previous to the law of 1904, physicians did not realize that they had any responsibility of the "tuberculous family" beyond caring for the patient. It is doubtful if ,prevoius to 1904, more than one or two per cent. of the physicians of Maryland concerned themselves at all with the protection of other members of the family. It can be authoritatively said that all the physicians now realize this obligation, or, if they do not realize it, it is impressed upon them by the families they are attending.

In summing up he states the following as the advantages gained by the Maryland law:

1. The state is brought into relation with the tuberculous patients without difficulty and without friction.
2. All classes of the population are reached.
3. The family regulation of tuberculosis is effected by dealing with the "tuberculous family," and the "tuberculosis domicile," rather than the tuberculous community or individual.
4. The protection of the family is put in the hands of the attending physician, who, in his relation and long acquaintance with the family, is the only person in a position practically to accomplish it.
5. The means to make measures of prevention effective (prophylactic supplies) are furnished to the "tuberculous family" by the state.

Another essential of a successful act is, that through the authentic notification of the cases in existence, the state can compel local officials and landlords to efficiently carry out disinfectant measures upon each death and removal—a most important prophylactic measure which is not capable of enforcement, except in exceptional instances, under our present law, because of failure to locate the cases. It is, of course, self obvious, that in addition to the essentials before enumerated, that any act to be truly successful, one of the most essential of essentials must be that the act in itself be framed with mandatory powers, and that a sufficient appropriation to put it in force must be available by the authorities in whose hands the enforcement of such an act is placed.

For a clearer idea of the nature of such measures, there is appended to this report a copy of the Maryland statute requiring registration. (Appendix 2).

This important subject of notification and registration and the general attitude of tuberculosis experts and public health authorities upon this topic, can be no better expressed than by quoting a few phrases from an address made by Dr. John Foster, of Connecticut, upon the subject of the relation of the state to the tuberculosis problem, which was delivered before the 24th Annual Conference of the State and Provincial Boards of Health of North America. Dr. Foster says:

If the state is going to segregate those seriously ill with consumption, how is it going to do it? It cannot do it without knowing exactly

where the tuberculous persons are, and just what the actual census of the indigent patients is, and this can be ascertained only by a system of notification and registration. . . . . We need, first of all then, an adequate system of notification and registration.

As to the Incipient Sanatoria.

In approaching this subject from the standpoint of the best interests of the state, the Board wishes to point out that throughout this report it has endeavored to suppress the individual standpoint entirely. It is our firm belief that no matter how great the need of charitable or semi-charitable institutions for the treatment and relief of consumptives may appeal to us as individuals, that in our official capacity we are justified in only looking at the problem from the standpoint of the greatest good to the greatest number. In other words, in endeavoring to decide, if possible, what policy presents the best possibility of reaching effectually the largest number of indigent tuberculous people in the briefest time, in such a fashion as to reduce the sickness and death rate from this disease. And we do not believe the state is justified in approaching this problem from any point of view.

Looking at the matter from this angle, the first question to be answered is this: Do state sanatoria for the treatment and cure of incipient tuberculosis pay? To adequately answer this question we must consider such points as these: What is the percentage of cure? What proportion of the tuberculous population can such institutions serve? Do they reduce the prevalence of tuberculosis in a state. And, lastly, whether other measures than sanatoria for incipient tuberculosis bring quicker and more satisfactory results and serve a larger proportion of the population? The original practical application of the incipient sanatoria idea seems to have been carried out in Germany, where the ideal was to have a bed in a sanatorium for each early case in a community. This still remains the highest ultimate ideal that can be held up in regard to the treatment of tuberculosis. The earlier institutions in this country were all started with the same idea, believing that they would become economically practical, because they would be the means of restoring to health and active work a considerable proportion of the population, after taking a course of treatment in such institutions for a few months. The original conception of the sanatorium treatment of tuberculosis can, we believe, be safely dismissed today as having proven in practice an irridescent dream. The facts have everywhere proven, first, that such institutions are very expensive if efficiently constructed and maintained; and second, that it has not been possible up to the present time in the states which have most liberally fostered the incipient sanatorium idea, to bring into such institutions more than a small precentage of the cases suitable for such treatment, nor to cure permanently a large per cent. of them. We believe that today, under our present conditions, whatever advance may be made in the future, no state can seriously contemplate the immediate raising of sufficient funds to construct sanatoria on such an extensive scale as to arequately serve the entire incipient tuberculosis population. Therefore, from the stand-

point at which these institutions were at first contemplated and fostered, it probably is not too much to say that the sanatorium up to the present time has failed to make good. But, incidentally, a very important service in the struggle against tuberculosis has been rendered by these tuberculosis sanatoria in a manner which was slightly, if not at all, appreciated when they first began to be built. Now it is generally conceded that the greatest good to the general public: that public and private sanateria for the treatment of early cases of tuberculosis has accomplished, has been that of education. It was found that the majority of patients who have once been treated at these institutions, returned to their homes enthusiastic, most convincing advocates of the theory of open air living for the prevention and cure of tuberculosis. Among the later institutions, the keynote in planning and administration has become more and more "education." As a natural deduction from these newer views, there has been a constant tendency to cut down the period of residence at such a sanatorium, the idea being that any intelligent person, given the advantages of a few months thorough rest, good nourishment, and being taught the fundamentals of the open air life, could carry out subsequently in their own homes all the essential principles necessary for a cure. Thus, while the early institutions often averaged a year's residence per patient, we find in some of the newer acts creating such tuberculosis sanatoria, that the length of residence is fixed by statute not to be more than six months. One state, Ohio, has gone so far as to frankly state that they expended a greater proportion of their construction fund upon very solid and substantial administration building and heating plant, while the pavilions and shacks for the housing of the patients, although carrying out all the fundamentals of sanatoria construction, were, nevertheless, made of the cheapest possible material. To quote from a discussion by the secretary of the Ohio State Board of Health, he says: "We are not certain whether future developments may not convince us that the state should not engage in the sanatorium business, and if so, our administration building and plants could be utilized for any other state institution, while the net loss from the abandonment of the sleeping pavilions is thus reduced to a minimum."

As to the Need of Hospital Care for Advanced Cases.

This aspect of the tuberculosis question was but little considered until a few years ago, but has loomed larger and larger the more deeply the tuberculosis question has been gone into.

Today, by correspondence with other State Boards and Departments of Health, this Board finds that there is almost a unanimous attitude among public health authorities that the question is more important and fundamental than the care of incipients. The reason for this attitude is two-fold:

(1) The humanitarian appeal that such helpless, destitute, suffering creatures, as the majority of indigent advanced consumptives are, make upon the public, is and justly should be much more imperative than the demand of the comparatively self-supporting incipient.

(2) That the advanced case is the chief spreader of the disease, and, therefore, care of such cases in suitable institutions where they can be segregated, is the most efficient means of lessening the prevalence of tuberculosis by removing them from the possibility of infecting their families and associates. Much work has been done on this problem, all tending to substantiate this conclusion.

Thus, Newsholme, studying the causes of decline in tuberculosis death rate in England and Wales, presents very convincing arguments that countries and communities which have had a policy of institutional segregation of advanced indigent cases in force for a considerable number of years, have shown a striking gain over other countries which have had practically all other influences at work except institutional segregation for advanced cases.

Robert Koch, the discoverer of the tubercle bacillus, believed that the decline in death rate in Prussia was largely due to the policy of hospital care of advanced cases.

At the same time, the duration of the stay is of importance. Thus, Flick, of Philadelphia, one of the earliest and most earnest of the advocates of effective control of the advanced tuberculosis cases, has stated, what has since become accepted by most authorities, that in all probability it is during the last few months of life that the average consumptive is more apt to infect his associates.

Statistical studies on segregation seem to bear out this conclusion. Newsholme found that the percentage of consumptives that died in hospitals had approximately doubled in 37 years. During the same period, 1866-1903, the death rate from pulmonary tuberculosis practically halved. The average stay was four months. In Prussia over 40 per cent. of consumptives die in institutions after a residence of some months.

On the other hand, Ireland shows an increasing tuberculosis death rate which has been parallel with a decrease in institutional segregation of consumptives. Paris also has shown no marked decline in its consumptive death rate in recent years. It is noteworthy that in Paris, although over 40 per cent. of the consumptives die in institutions, the average stay is only 23 days. In other words, they go there when in a dying condition and after the seeds of infection have been already planted in the lungs of their associates.

The Massachusetts Commission states: "With the confident assurance that institutional segregation of the advanced dying case of consumption for the period of three months is the most potent factor in reducing the death rate, it is believed that Massachusetts should have more hospital provision for the advanced dying consumptive." Therefore, the Board concludes that:

1. Hospitals for advanced consumptives are considered by most authorities today as the most urgently needed type of institutions for the handling of tuberculosis.

2. That such institutions are needed on humanitarian grounds.

3. That their efficiency as a means of prevention far outweighs their relief function.

4. That to be efficient as "preventoriums" for the benefit of the tuberculous population, the patient should average at least three months' stay in the hospitals before death. To render this possible other aspects of the "advanced hospital" must be considered.

As to the Desirability of Local Hospitals and the Segregation of Advanced Cases of Pulmonary Tuberculosis Within Comparatively Easy Access to Their Homes.

It has just been shown that provision for suitable and humane care of advanced cases in hospitals is one of the most important weapons that modern society has in its fight against tuberculosis.

The next question is, Where shall such institutions be located? It is the unanimous opinion of the Board that such institutions should be as near the patients' homes as possible. We consider the question as to who should construct and maintain them as of secondary importance compared to this basic principle.

The care of the far-advanced, dying consumptive is radically different from that of incipients and moderately advanced cases. The incipient class needs to have a carefully laid out scheme of life unfolded before them and drilled into their very being "line upon line, precept upon precept," until the habits of open-air life and personal hygiene become reflex. At the same time they need facilities for a rest cure and careful instruction as to the nature of the disease. In brief, they need the sanatorium or the essentials of the sanatorium idea applied to home environment. The far-advanced, dying case, on the other hand, needs identically similar care to that needed by any other seriously ill person with the addition of a maximum of fresh air. Where this can be carried out with adequate medical supervision, skilled nursing attendance, and safe isolation from the other members of the family, the best place for such a person is the home. Where the social and financial status of the victim is not sufficient to assure this, then it is far better for the consumptive's own comfort, and infinitely safer for his associates, family and friends, that he be removed to a suitable hospital.

To obtain the best results, in other words, to insure that such institutions are used by those whom they are designed to serve, it is absolutely necessary that they be within easy access of their friends and home. It is only humane to treat such hopeless cases in close proximity to family and friends, and under such circumstances a patient is far more willing to stay in a hospital. The wards of a general hospital are not, for various reasons, suitable for the care of dying consumptives; neither is the general atmosphere of a county poor farm, such as is apt to attract such patients, so long as they have any place to remain at home. Hospitals for advanced cases of tuberculosis should not be constructed nor run on a pauperizing basis.

In addition to the crying need of such institutions to better provide for the "creature comforts" of the tuberculous victim, and the protective effect the isolation of advanced cases has upon the health of his family, there is a distinct need for such institutions in order to

restrain therein as a menace to public health, such consumptives not necessarily in as advanced stage of the disease, but who show abundant tubercle bacilli in their sputum and who will not heed the instructions of the medical attendant or home-visiting nurses relative to the proper disposal of their sputum. In other words, the "unteachable consumptive."

From what has been said in the section on the need of hospital care for advanced cases, it will be recollected that segregation of the dying consumptive during the last three months of life is one of the most potent factors in decreasing the death rate. Obviously, institutions built for the care of advanced cases, but so situated that the great majority of inmates insist upon going home to die when they fail to improve—in brief, going just when they are most dangerous—must fail dismally as preventative forces. Yet this has been precisely the experience of Massachustte. This state has built recently three magnificently located and equipped institutions, which were designed primarily for the far-advanced cases, yet in practice it has been impossible to keep patients in the institution after it became clear to themselves that they ware failing.

It should be noted in passing that the transportation of a large number of advanced consumptives to and from such institutions, must in itself constitute, to some degree at least, a danger to the general public. On the other hand, public opinion, at the present time at any rate, would not approve of the forcible restraint and segregation of advanced consumptives in localities geographically so far removed from their homes as to render access by family and friends practically impossible. On the other hand, the experience of New York and many other localities has demonstrated that by the exercise of tact, firmness and kindness after arrival at the hospital, public opinion can readily be educated to the point where it will heartily approve such restraint measures, provided they can be carried out near at home.

Paradoxical as it may sound, the consensus of best opinion today on the question of the proper sphere of hospitals for advanced cases is that the efficiency of such institutions as a protection to the public health increases in direct ratio to the number of deaths per year up to approximately three or four deaths a year per bed, but for a ratio greater than this the usefulness of such institutions as "preventoria for the general public" rapidly declines, until we reach such institutions as those of Paris, crowded with dying consumptives, practically all of whom are admitted moribund, with stay before death of only 23 days, and with no noticeable decline in the consumptive death rate.

The Massachusetts Commission emphasizes the failure of the three new state institutions to fulfill the purpose for which they were planned (to segregate the far-advanced consumptives, because of the unwillingness of patients to die away from their homes, by contrasting the number of deaths in the first year at the three state institutions, 150 deaths to 450 beds, with those of the Boston Consumptives Hospital at Mattapan, built with only 190 beds, where there are upwards of 300 deaths a year and there is constantly demand for more admission

than be accommodated. It has been found by actual experience that in a populous and comparatively small state as Massachusetts it is not feasible to segregate far-advanced cases in institutions at considerable distance from their homes. How much more impossible of achievement would such a scheme prove in our own state?

As to the Segregation of the Sexes.

The Board merely wishes to point out in this report that from the experience of other states in the matter, no scheme for the handling of the tuberculosis problem should fail to at least consider this aspect of the institutional problem. Serious scandals have arisen from the too close propinquity of the sexes in many admirably managed institutions. The medical superintendent of one of the largest sanatoria in the country remarked in conversation with the state commissioner that "the sex problem was a perpetual nightmare;" that beside it all his other problems and perplexities seemed trivial, and it cropped out repeatedly in spite of division of the grounds with a penalty of immediate dismissal if a patient was found in the grounds allotted to the opposite sex, and an elaborate system of guards at night.

The Massachusetts Commission state that they have been informed that many clergy, in states where mixed sanataria exist, advise their female parishioners not to go to such sanatoria and advise sex segregation in the future in that state's institutions.

Leaving the probabilities of occasional scandal from illicit cohabitation among the patients to one side, it can be readily seen that there would be many obvious advantages from segregation of the sexes in such things as freedom of the grounds, and greater ease in enlarging existing plants than when separate toilets and bathing facilities must be planned for each sex. The disadvantage of sex segregation is that such a policy will hinder the complete segregation according to stage of disease.

In considering this problem only the incipient and moderately advanced cases need to be considered.

As to Various Plans and Methods in Force or Advocated for the Purpose of Financing the Construction and Maintenance of Public Sanatoria and Hospitals for Consumptives.

It will be noted that the Board has expressed its belief that hospitals for far-advanced cases, if most wisely planned, should be built in relatively small units and so situated as to be relatively near to the prospective patient's home and of easy access to his friends. The Board has not expressed an opinion as to whether a sanatorium for early and moderately-advanced cases should be single, or distributed in many localities. The general impression seems to be at present that, from the standpoint of effectiveness as educational institutions, that it is best to have relatively few sanatoria for incipients. Whenever we have used the term "incipient," the Board means to include such cases of tuberculosis as are moderately advanced and not debilitated but

still capable of achieving an arrest of the disease, along with the strictly incipients as suitable patients for sanatoria.

The question of how to finance tuberculosis institutions of all kinds is one which the Board does not feel qualified at this time to answer. There are many possible solutions of this question which have been attempted by various states. We will enumerate some of them here:

The simplest form of state care of tuberculosis citizens is for the state itself to build and maintain a single institution and to receive there all classes of consumptives. This method is in vogue in many states and is open to many objections.

The next step is that of the state building adjacent institutions where the two classes are segregated but under the same management; one, a state sanatorium for incipients and moderately-advanced, the other a hospital for advanced cases. Maryland has developed this plan most successfully. We have no data at hand to indicate how well utilized the hospital for far-advanced cases is utilized, *i. e.*, the number of patients that are content to remain in it until death.

Another method is that of having the state build and operate both sanatoria and hospitals for advanced cases, but to have them in different localities. Massachusetts is a conspicuous example of this method and some of the drawbacks of such a system have been noted in the discussion on advanced hospitals. It should also be noted that such a method tends to discourage local care of consumptives. A populous city or county may already have in force a complete local system maintained at purely local expense, and then the building of state institutions to cover all classes of consumptives imposes a double burden upon such communities.

Another method is that of the state placing all the burden of institutional care upon the local communities, but stimulating local communities, *i. e.*, counties and cities to make proper provision for the care of their own consumptives by granting state aid, either in building or maintenance, or both. Ontario is a conspicuous example of this policy. The greatest objection that can be urged against this policy is that it must tend to fill local institutions with cases in the various stages of the disease.

Another policy is for the state to maintain institutions for early cases and tacitly leave the care of advanced cases to local communities. This is practically the policy of New York state at present and the Board apprehends it.

Another policy is that of having the state erect a moderate sized sanatorium where instruction in proper hygiene is emphasized, and then requiring counties by a mandatory law to make proper provision for their advanced cases. Ohio is an example of this scheme. (See appendix 3).

This Board feels that so many of these schemes have been in force but a short time, and some of them that have met with satisfactory success are in states where tuberculosis problems differ materially from those in this state that we cannot safely draw general conclu-

sions as to applicability of any of them to our own state, and this fact is the greatest of our reasons for advising the appointment of a special commission to study this problem. Dr Price, the secretary of the Maryland Board of Health, a state that has gone into the tuberculosis problem very thoroughly, also advises this step in a letter to the Board. He concludes his communication, relative to the advisability of various plans, as follows:

> What I would advise, in a general way, would be the appointment of a commission to investigate the whole tuberculosis question in the State of Washington and report two years from the date of their appointment, or else to empower your Board to make a like investigation and give them sufficient time and funds to make the investigation thorough. This may seem like a needless waste of time, but I am convinced that the period covered in securing data will not mean any delay in the institution of practical and effective work.

As to School Measures in Relation to the Tuberculosis Question.

This subject is one that is often overlooked by those who are interested only in the institutional questions as they come into relation with tuberculosis. But this Board feels that it is one of the fundamental problems in relation to this disease and that it cannot fail to give some consideration to it here. In the first place, it is a truism to state that every community under our present system is necessarily spending large sums of money on the education of children who are destined to die before the age of twenty-one. In other words, the state is losing outright the sum of money which is spent upon the education of these children, as they never live to give the state any returns in the shape of useful lives as citizens.

Mr. McSweeney, of the Board of Boston Consumptives Hospital, and one of the most careful investigators of the tuberculosis question from a sociological standpoint now living, has estimated that the city of Boston alone is spending what ultimately proved to be a waste of one hundred thousand dollars annually on such children. Mr. McSweeney makes the very pertinent point "If the children of one generation can be prevented from becoming tuberculous, the problem of tuberculosis will have been solved."

Thus we see that tuberculosis is a problem even as it effects the school, and the question must be seriously considered as to what are the best methods or measures to be taken in dealing with the question during the school age.

First and foremost, the Board believes that suitable measures ought to be instituted by the state to enable our public schools to act as positive factors in the fight against tuberculosis, and not, as is only too often the case under our present conditions, the unconscious breeding ground for the disease.

The most obvious and perhaps the most important method that could be easily put in force, would be to extend what is already beginning to be done in our public schools, namely, a course of studies so as to include thorough, yet plain and easily understood instructions, upon every-day problems of hygiene and sanitation, and means of

preventing tuberculosis and other diseases. If we could imagine such an ideal as a condition that beginning with the calendar year of 1911, that each public school, at least in the higher grades, should become a center for active spreading of sanitary knowledge, and that these children should all leave our grade schools with a thorough grounding in regard to the nature of tuberculosis, the manner of infection, manner of prevention, and sort of environment that tends to prevent it, as well as the manner of life that would tend to increase it, it would indeed be pleasant to remember that ten years from this time the majority of these children would comprise not less than one-third of our active voting population, and that we would have a new generation actively engaged in all the manifold branches of our civilized life, with such an intelligent grasp of this problem that they would not only take the proper precautions to insure good health in themselves, but, furthermore, they would not tolerate insanitary conditions to prevail which would, of necessity, tend to propagate the disease.

Turning from the educational possibilities, which are simply enormous, and fixing our attention more directly on the point of what the state could do immediately, we wish to point out that the two factors which would tend to immediately stop the danger of the school becoming the breeding place for tuberculosis, would be a thoroughly enforced and sufficient system for the medical inspection of schools. Naturally the possibility of such an inspection detecting early cases of tuberculosis is only a small portion of the benefits of such a system, but in itself is one of the best arguments of careful medical inspection of our public schools.

In line with this would be the improvement of the sanitation of our public schools, particularly in the rural districts.

After investigation into this subject the Board might find that either through itself or through the Department of Education, certain sanitary rules could be put into effect with good results, but the medical inspector who would get down to the individual problem connected with each school house or school room, would prove to be by far the greatest factor in bringing this condition of improved sanitation of schools. We do not by this mean in any way to criticize the general efficient and sanitary conditions of our public schools, as we are thoroughly convinced that in this respect our own state is far in advance of the majority of the states of the Union. Nevertheless, we do not believe that we will be disputed by anyone, and least of all by the educational authorities, if we assert our belief that there still remains room for much improvement along these lines.

The third direct step that could be taken for preventing the spread of tuberculosis through our schools, is excluding children who show active indications of pulmonary tuberculosis. In line with this would be such measures as those that have been tried out with marked success in many eastern states of open air schools for the debilitated and pre-tuberculosis child. Some of the debilitated children would probably be infected with tuberculosis but would be no

menace to others. Such measures as these, while ideal, would be only practicable at present in our larger cities. If the idea of consolidation of rural school districts, which at present is being tried out quite extensively in this state, proves as successful as its advocates predict, we can see no reason why the establishment of such open air schools would not become feasible even in the smaller towns and more sparsely settled sections of our state. But we are certain that a child with open tuberculosis, that is, showing tubercle bacillus in the sputum, should not be allowed in any public school, either the ordinary type or the open air plan, both because such children are not in a condition to meet the ordinary demands of public school curriculum, either physically or mentally, and also because all such children must always remain a permanent menace to other schoolmates.

The important question still remains to be answered, what shall we do with these children? Without stopping to go into details for our reasons for this conclusion, we believe that experience has rather effectually shown that the general public sanatoria are not suitable places for children under 14, and if the state is to build or supervise the building of public institutions for the care of the tuberculous, no complete system ought to be contemplated which does not provide for the institution of a hospital school for children suffering from tuberculosis.

The Massachusetts Commission points out very clearly in their report that there is such need of it in that state that they recommend the immediate building of such an institution, namely, a hospital school for children with active pulmonary tuberculosis.

Institutions Other Than Public.

A variety of institutions for the care of tuberculosis, other than public sanatoria, already exist or are planned, which the Board merely desires to enumerate, and to point out that the state cannot avoid coming into some relationship with them all. All of them have their proper sphere and, without exception, deserve the heartiest commendation, but they cannot in any sense be expected to excuse the state from final responsibility in the tuberculosis problem. Such institutions differ widely from each other. Some of the principal classes are as follows:

(a) Private profit-making sanatoria or hospitals.

(b) Private but semi-charitable institutions.

(c) Institutions maintained by and in the interests of certain groups, as sanatoria or hospitals built and maintained by labor unions, fraternal orders, religious associations, and by large employers of labor in behalf of their employees.

(d) Institutions of a semi-charitable and semi-public nature which are self incorporated and governed by a self perpetuating board of

trustees, founded upon private endowments, but which must be wholly or largely self-supporting, and are not profit-making.

(e) Institutions maintained by anti-tuberculosis societies or communities, wholly or largely of a charitable nature.

(f) Institutions for the care of other forms of tuberculosis than consumption.

The state can have no direct interest in, nor can it consistently help support institutions of the first and third types so long as they are maintained along the lines that we have indicated. The state should have power to insure that such institutions are conducted in an orderly, moral and sanitary manner.

But with all the other types the question as to the expediency of state or community aid or subsidy arises, and this state should in the near future decide definitely upon the policy it should pursue in regard to such institutions.

The Board refuses to advocate any policy either for or against such state subsidy, with the meager information it has on the results of such a policy in other communities. It is to be carefully noted that all such schemes are radically different from schemes of state subsidy for public institutions.

As to the Function and Desirability of Other Agencies for the Prevention and Control of Tuberculosis.

There are several other agencies of a more or less public nature that have been and are at present being utilized by various states and communities. Such agencies are the following:

Day camps.

Tuberculosis classes.

Tuberculosis dispensaries.

Visiting nurses for home instruction.

Institutions for other forms of tuberculosis.

Without attempting to go into details on these subjects, it would appear from practical experience that day camps and tuberculosis classes have only a very limited sphere of usefulness.

Dispensaries are advocated most earnestly by health authorities for larger cities and towns throughout the east. Whether they would fit into our conditions in this state has been seriously questioned. But the very marked success of the Free Tuberculosis Dispensary which is maintained in Seattle at present by the Anti-Tuberculosis League, has convinced the Board as to their practicability in all of our larger cities. The possibility that tuberculosis dispensaries will ever cut very seriously into the income of the medical profession, as the abuse of general dispensaries has so generally done in the east, appears to us extremely remote.

The Board is not in a position to outline any detailed scheme for the utilization of house visiting nurses by the state or municipalities, but it believes that they are of the greatest service; in fact, one of the most important factors that exist in the present handling of the

tuberculous, and we would respectfully suggest that such house tuberculosis workers should be attached to each local health office in our larger cities. The entire subject of house care of the consumptive deserves extended consideration, but at this point we will only refer to it in passing as one of the major weapons at our disposal.

The Board believes that institutions for the care of children suffering with tuberculosis of the bones, or other "surgical tuberculosis," are needed in every state, but will not go into details of this problem at this time.

As to the Proper Sphere of Voluntary Associations Against Tuberculosis.

Under the term "voluntary associations," agencies in the struggle against tuberculosis, such as anti-tuberculosis associations, whether local, state or national, associated charities, labor unions, relief committees of churches, fraternal bodies, social forces that can be inaugurated by the large corporations and other extensive employers of labor and of the various sociological and social welfare leagues, women's clubs, etc., that exist in all of our large cities, as well as such bodies as Boards of Trade, Chambers of Commerce, Commercial Clubs, etc., all such organizations are today interested, as a general rule, in the tuberculosis question, and all of them in varying degrees, both in our own state and elsewhere, have played a considerable part in the present struggle against tuberculosis. The activity of such organizations must of necessity vary from the anti-tuberculosis associations, whose only reason for existence is the tuberculosis problem, to such bodies as the relief committees of churches and fraternal orders, who are only incidentally confronted with the tuberculosis problem as one of the many causes of illness and disability which they are called upon to investigate and relieve. However, all of these bodies can be considered together in contrast to the regular agencies of government.

We cannot go into this phase of the tuberculosis problem as deeply as the subject deserves. We wish merely to present the following general conclusions:

1st. That such bodies as these, and especially the anti-tuberculosis societies themselves, have done an immense amount of good in the past, and will, undoubtedly, continue to exert an increasing amount of potential influence in the future in regard to the solution of the tuberculosis problem.

2nd. That the greatest net result up to the present time from the activity of all such bodies has been the better diffusion of knowledge among the general public in regard to the nature of tuberculosis. That such associations, being composed largely of non-medical persons, influence the public more strongly because, presumably, more distinctly than does an organization of medical men. That the associations have, in many instances, pointed out the way for useful work to our regular health authorities. That such bodies have, in many instances, been forced from humanitarian motives, and because the government bodies

of such associations have felt the call upon humanity of the indigent consumptive for immediate assistance to be so great as to demand, in some measure at least, an immediate response, to extend their activity beyond the lines of education into such channels as financing, building and maintenance of sanatoria, of advanced hospitals, of the conducting of dispensaries, of a system of visiting nurses and social workers, of the introduction of day camps, and in many other directions too numerous to be mentioned.

For all these philanthropic methods, the American public owes such associations today a debt which never can be repaid. The fact that such bodies have been literally forced into institutional fields must be put down equally to their glory and to the discredit of the American people. It is inherently a most selfish, as well as a short-sighted policy, that our governmental agencies, which represent the entire public, have left so much of the pioneer work in this direction entirely to the initiative of private philanthropy. However much we may feel that private enterprise and private philanthrophy should be encouraged in these directions, the mere fact that the community is about to enter any given field of tuberculosis activity should not create an impression that all activity in these directions by private individuals or associations should cease. Nevertheless, it is the fixed opinion of the Board that the tuberculosis problem, looking at it in its entirety, is of too great magnitude to be left to private enterprise. "The time has come for communities, and particularly for the health authorities, to shoulder the responsibility that rightly belongs to them. The community should enter this field because in the long run its work must be more uniform, more lasting, and more thorough"—(Massachusetts Commission). Moreover, this manner of attacking the tuberculosis problem distributes the financial burden which is necessarily attached thereto, more evenly and more justly upon the entire population, and removes the stigma of pauperism and implied dependence upon private charity, which is so frequently a great stumbling block in inducing the indigent consumptive to take advantage of institutions, even after they are supplied by private enterprise and philanthropy.

In short, it is the opinion of the Board that ultimately the people of this state, and every other civilized community, will come to the conclusion that every citizen who is so unfortunate as to fall a victim to this terrible disease will be able to feel that physical, moral and financial support for him and those dependent upon him is within his reach, because the necessary assistance for just such a contingency is a part of the privileges of his citizenship, and not available only, if at all, after he has been forced to place himself in the humiliating position of one dependent upon the uncertain charity of some of the more fortunate of his fellow citizens.

APPENDICES

APPENDIX NO. 1.

STATISTICAL DATA

Relative to the Prevalence of Tuberculosis in the State of Washington for the Three Years, Together With Individual Tables for Each County and City of the First Class.

Statistics on Tuberculosis of the State of Washington for the Years 1908, 1909 and 1910.

All death rates are computed on the basis of the number of deaths from tuberculosis each year for each 100,000 population. Special attention is called to the uniform decrease of pulmonary tuberculosis in contrast to the increase of non-pulmonary forms, also the contrast of the rate between the east and west of the state.

Population of the State.

1908	980,000
1909	1,050,000
1910	1,141,990

Average of Entire State.

	1908.	*1909.*	*1910.*
Consumption alone (pulmonary tuberculosis)	85.39	83.23	78.28
Other forms	19.08	21.61	27.93
All forms	104.47	104.84	106.21

First Class Cities.

(Average Death Rate).

	1908.	*1909.*	*1910.*
Consumption alone (pulmonary tuberculosis)	92.3	94.6	82.7
Other forms	29.5	27.4	35.3
All forms	121.8	122.0	118.0

State Exclusive of First Class Cities.

	1908.	*1909.*	*1910.*
Consumption alone (pulmonary tuberculosis)	80.8	75.4	75.6
Other forms	12.2	17.6	22.6
All forms	93.0	93.0	98.2

Tuberculosis West of the Cascade Mountains.

	1908.	*1909.*	*1910.*
Consumption Alone (Pulmonary Tuberculosis)—			
Average rate per 100,000	88.0	87.9	79.9
Average rate first class cities (Bellingham, Everett, Seattle, Tacoma)	87.2	98.2	82.3
West Side exclusive cities	89.3	77.2	80.1
All Forms—			
Average rate per 100,000	108.8	111.6	98.9
Average rate first class cities	117.9	119.4	122.2
West Side, exclusive cities	99.8	97.5	93.8

Tuberculosis East of the Cascade Mountains.

	1908.	1909.	1910.
Consumption Alone (Pulmonary Tuberculosis)—			
Average rate per 100,000	80.8	74.5	64.7
Spokane City rate	110.4	82.9	87.1
East Side exclusive Spokane City	71.2	71.7	63.5
All Forms—			
Average rate per 100,000	96.9	89.8	78.2
Spokane City rate	135.6	111.6	117.8
East Side exclusive Spokane City	85.0	86.2	76.3

First-Class Cities.

Tuberculosis death rate per 100,000 population.

Bellingham—	1908.	1909.	1910.
Consumption alone (pulmonary tuberculosis)	115.2	103.1	86.4
Other forms	48.0	26.9	41.1
All forms	163.0	130.0	127.5
Everett—			
Consumption alone (pulmonary tuberculosis)	85.8	117.6	72.6
Other forms	15.1	40.8	64.5
All forms	100.9	158.4	137.1
Seattle—			
Consumption alone (pulmonary tuberculosis)	84.2	89.7	84.2
Other forms	28.9	26.7	36.3
All forms	113.1	116.4	120.5
Spokane City—			
Consumption alone (pulmonary tuberculosis)	112.9	81.2	87.1
Other forms	25.8	28.1	30.6
All forms	138.8	109.3	117.8
Tacoma—			
Consumption alone (pulmonary tuberculosis)	95.4	113.3	75.2
Other forms	37.8	24.2	28.5
All forms	133.2	137.5	103.7

AVERAGE RATE PER 100,000 POPULATION FOR PULMONARY TUBERCULOSIS FOR THE ENTIRE STATE FOR 1908, 1909 AND 1910.

	1908.	*1909.*	*1910.*
Adams	53.6	40.0	18.3
Asotin	134.6	72.0	68.5
Benton	67.1	104.4	88.1
Chehalis	67.5	62.1	64.6
Chelan	103.4	83.1	79.4
Clallam	46.5	30.3	29.6
Clarke	52.9	77.0	88.0
Columbia	70.8	113.0	42.6
Cowlitz	99.9	43.1	63.3
Douglas	51.8	38.4	21.6
Ferry	00.0	00.0	00.0
Franklin	00.0	48.4	00.0
Garfield	49.3	73.1	142.8
Grant	00.0	25.9	45.9
Island	58.8	111.1	85.0
Jefferson	162.5	73.6	35.9
King	166.4	130.3	90.5
Kitsap	55.1	34.1	67.8
Kittitas	104.9	22.4	59.4
Klickitat	29.8	69.1	58.7
Lewis	93.7	53.3	59.2
Lincoln	55.5	29.0	57.1
Mason	122.4	120.0	193.5
Okanogan	18.8	69.5	62.0
Pacific	37.0	67.5	80.0
Pierce	195.4	123.3	110.8
Skagit	54.5	85.4	78.7
San Juan	87.7	00.0	55.5
Skamania	89.3	00.0	104.0
Snohomish	59.8	70.5	55.2
Spokane	151.5	99.4	120.0
Stevens	32.9	56.3	47.4
Thurston	54.0	82.8	102.8
Wahkiakum	00.0	30.6	33.3
Walla Walla	95.2	85.7	59.6
Whatcom	78.6	64.6	47.6
Whitman	61.0	84.4	81.2
Yakima	60.8	114.2	114.1
Bellingham	115.2	103.1	86.4
Everett	85.8	117.6	72.6
Seattle	84.2	89.7	84.2
Spokane City	112.9	81.2	87.2
Tacoma	95.4	113.3	75.2

AVERAGE RATE PER 100,000 POPULATION FOR ALL FORMS OF TUBERCULOSIS FOR THE ENTIRE STATE FOR 1908, 1909 AND 1910.

	1908.	*1909.*	*1910.*
Adams	64.3	45.0	36.6
Asotin	134.6	108.1	68.5
Benton	67.1	119.5	100.8
Chehalis	75.6	87.5	73.0
Chelan	103.4	98.2	99.3
Clallam	46.5	30.3	103.6
Clarke	56.0	88.7	99.5
Columbia	99.1	113.0	56.8
Cowlitz	108.1	51.7	63.3
Douglas	59.1	38.4	32.5
Ferry	00.0	00.0	20.8
Franklin	00.0	72.6	00.0
Garfield	74.0	73.1	166.7
Grant	00.0	38.9	80.4
Island	88.2	166.6	106.2
Jefferson	175.00	85.8	47.9
King	189.8	150.0	111.7
Kitsap	69.0	63.9	73.6
Kittitas	111.1	63.2	70.0
Klickitat	39.7	98.7	58.7
Lewis	100.8	66.6	102.8
Lincoln	74.0	42.1	74.3
Mason	142.8	120.0	210.9
Okanogan	28.3	86.9	69.7
Pacific	37.0	85.4	112.0
Pierce	233.6	160.0	143.2
San Juan	87.7	28.6	55.5
Skagit	69.0	85.4	106.0
Skamania	133.9	00.0	138.6
Snohomish	63.1	102.5	87.0
Spokane	163.6	108.4	151.1
Stevens	42.3	60.6	51.3
Thurston	60.8	101.9	137.1
Wahkiakum	00.0	30.6	100.0
Walla Walla	128.5	107.1	100.3
Whatcom	83.2	103.4	55.5
Whitman	70.7	93.7	96.1
Yakima	82.0	132.8	143.8
Bellingham	163.0	130.0	127.5
Everett	101.0	158.4	137.1
Seattle	113.1	116.4	120.5
Spokane City	138.8	109.3	117.8
Tacoma	133.2	137.5	103.7

APPENDIX NO. 2.

AN ACT

To Protect Citizens of Maryland From Certain Communicable Diseases, Especially Tuberculosis of the Lungs and Larynx.—Chapter 399. Acts of 1904.

An Act to Protect Citizens of Maryland from Certain Communicable Diseases, Especially Tuberculosis of the Lungs and Larynx.

(Chapter 399, Acts of 1904).

Section 1. Be it enacted by the General Assembly of Maryland that from and after the date of the passage of this act, any person affected with any disease whose virus or infecting agent is contained in the sputum, saliva, or other bodily secretion or excretion who shall so dispose of his sputum, saliva, or other bodily secretion or excretion as to cause offense or danger to any person or persons occupying the same room or apartment, house or part of a house, shall on complaint of any person or persons subjected to such offense or danger be deemed guilty of a nuisance and any person subjected to such a nuisance may make complaint in person or writing to the Commissioner of Health of Baltimore city or the local health officer of any city, town or county in the State of Maryland where the nuisance complained of arises or exists and it shall be the duty of the Commissioner of Health or of any local health officer receiving such complaint to investigate and, if it appears that the nuisance complained of is such as to cause offense or danger to any person occupying the same room, apartment, house or part of a house, he shall serve notice upon the person so complained of reciting the alleged cause of offense or danger and requiring him to dispose of his sputum, saliva or other bodily secretion or excretion in such a manner as to remove all reasonable cause of offense or danger. And any person failing or refusing to comply with orders or regulations of the Health Commissioner of Baltimore city or of the health officer of any city, town or county, requiring such nuisance to be abated, shall be deemed guilty of a misdemeanor and on conviction thereof shall be fined ten dollars: *Provided*, That the requirements of this section shall apply only to pulmonary and laryngeal tuberculosis, pneumonia, influenza and such other diseases as the State Board of Health may from time to time determine to be communicable by means of sputum, saliva or other bodily secretion or excretion.

Sec. 2. It shall be the duty of the physician attending any case of pulmonary or laryngeal tuberculosis to provide for the safety of all individuals occupying the same house or apartment, and if no physician be attending such patient this duty shall devolve upon the local health board and all duties made incumbent upon the physician in the following sections shall be performed by the local board of health in all cases of pulmonary or laryngeal tuberculosis not attended by a physi-

cian or when the physician is unwilling or unable to perform the duties specified.

SEC. 3. It shall be the duty of the local board of health to transmit to the physician reporting any case of pulmonary or laryngeal tuberculosis a printed report after the manner and form to be prepared and authorized by the State Board of Health naming such procedures and precautions as in the opinion of the State Board of Health are necessary or desirable to be taken on the premises of the said tuberculous case, and it shall be the duty of the State Board of Health to print and keep on hand sufficient number of such report blanks and to furnish the same in sufficient number to any local board of health upon due requisition of the latter. Upon receipt of the blank report the physician shall fill, sign and date the same and return to the local board of health without delay: *Provided*, That if the attending physician is unwilling or unable to undertake the procedure and precautions specified he shall so state upon his report blank, the duties herein prescribed shall then devolve upon the local board of health. Upon receipt of this report the local board of health shall carefully examine the same and if satisfied that the attending physician shall have taken all necessary and desirable precautions to insure the safety of all persons living in the house or apartments occupied by the consumptive and to insure the safety of the people of the State of Maryland, the said local board of health shall issue an order on the State Board of Health in favor of the attending physician for the sum of one dollar and fifty cents ($1.50) to be paid by the State Board of Health out of a fund hereinafter provided. If the precautions taken by the attending physician are, in the opinion of the local board of health, not such as will remove all reasonable danger or probability of danger to the persons occupying the said house or apartment, the local board of health shall return to the attending physician the report blank with a letter specifying the additional precautions which they shall require him to take, and the said attending physician shall immediately take the additional precautions specified and shall record and return the same on the original blank to the local board of health. It shall further be the duty of the local board of health to transmit to the physician reporting any case of pulmonary or laryngeal tuberculosis a printed requisition which shall be prepared by the State Board of Health and issued in sufficient number to any local board of health upon due requisition of the latter. Upon this requisition blank shall be named the materials kept on hand by the local board of health for the prevention of the spread of the disease, and it shall be the duty of the State Board of Health to purchase such supplies as it may deem necessary from the fund hereinafter provided and to supply them to any local board of health upon the requisition of the latter. Any physician may return a duly signed requisition to the local board of health for such specified materials and in such amount as he may deem necessary in preventing the spread of the disease, and all local boards of health shall honor as far as possible a requisition signed by the attending physician in such case.

It shall be the duty of every local board of health to transmit to every physician reporting any case of pulmonary or laryngeal tuberculosis or to the persons reported as suffering from this disease, provided the latter have no attending physician, a circular of information prepared and printed by the State Board of Health and which shall be furnished in sufficient quantity to every local board of health on due requisition of the latter. This circular of information shall inform the consumptive of the best methods of cure of his disease and of the precautions necessary to avoid transmitting the disease to others.

SEC. 4. Any physician or person practicing as a physician who shall fail to execute the duties prescribed by this act or who shall knowingly report as affected with pulmonary or laryngeal tuberculosis any person who is not so affected, or who shall wilfully make any false statement concerning the name, age, color, sex, address or occupation of any person reported as affected with pulmonary or laryngeal tuberculosis, or who shall certify falsely as to any of the precautions taken to prevent the spread of infection shall be deemed guilty of fraud and on conviction thereof shall be subject to a fine of one hundred dollars or to imprisonment not exceeding six months, or to both fine and imprisonment in the discretion of the court.

SEC. 5. The State Board of Health shall prepare and keep on hand all the circulars, blanks and printed matter required by the preceding section and all additional printed matter necessary in executing the provisions of this act, and shall issue the same in sufficient quantity to the local boards of health on due requisition of the latter, and the said State Board of Health shall further purchase and issue upon due requisition to the local boards of health the supplies required by the provisions of this act. For the purpose of defraying the expenses of printed matter and postage, for recompensing physicians for measures of prophylaxis, and for purchasing and issuing the supplies necessary in carrying out the provisions of this act the sum of five thousand dollars ($5,000) annually or as much thereof as may be necessary is hereby appropriated, payable by the treasurer of the state upon warrant of the comptroller at such times and in such sums as may be authorized by the State Board of Health upon presentation of the proper voucher.

SEC. 6. And be it enacted that this act shall take effect from the date of its passage.

Approved April 8, 1904.

REGISTRATION OF TUBERCULOSIS.

(Chapter 412, Acts of 1904).

SECTION 34g. Be it enacted by the General Assembly of Maryland that from and after the passage of this act the State Board of Health of Maryland shall keep a register of all persons in this state who are known to be affected with tuberculosis. The State Board of Health shall have sole and exclusive control of said register, and shall not

permit inspection thereof nor disclose any of its personal particulars except to officials authorized under the laws of Maryland to receive such information.

SEC. 34h. The superintendent or other person in charge or control of any hospital, dispensary, school, reformatory or other institution deriving the whole or any part of its support from the public funds of the State of Maryland or any city, town or county in the State of Maryland, having in charge or under care of custody any person or persons suffering with pulmonary or laryngeal tuberculosis shall within forty-eight hours after recognition of such disease make or cause to be made in the manner and form prescribed by the State Board of Health a record of the name, age, sex, color, occupation, social condition and residence of the person or persons so affected, together with such information as may seem necessary or important. And all such records shall be delivered under seal of the State Board of Health on Monday of the week immediately following that in which the records were made. Any superintendent or other person charged with a duty under this section who shall fail or refuse to comply with the requirements of this section shall be deemed guilty of a misdemeanor, and on conviction thereof shall be fined not more than twenty-five dollars.

SEC. 34i. Whenever any physician knows that any person under his professional care is affected with pulmonary or laryngeal tuberculosis he shall transmit to the secretary of the State Board of Health within seven days and upon blanks provided by the State Board of Health for that purpose the name, age, sex, color, occupation, social condition and residence of such person, and any physician failing or refusing to comply with the requirements of this section shall be deemed guilty of a misdemeanor and on conviction thereof shall be subject to a fine of ten dollars.

SEC. 34j. The apartments occupied by any consumptive shall be deemed infected and when vacated by death or removal of said consumptive occupant shall be disinfected by the board of health of city, town, or county in which such apartments are situated. And it shall be the duty of the householder, physician, or other person having knowledge of the facts to notify the local board of health within forty-eight hours after the death or removal of a person affected with pulmonary or laryngeal tuberculosis. And any person failing to comply with the provisions of this section shall be deemed guilty of a misdemeanor and on conviction thereof shall be subject to a fine of ten dollars.

SEC. 34k. Any person who lets for hire or causes or permits any one to occupy apartments previously occupied by a consumptive, before such apartments shall have been disinfected by a board of health, shall be guilty of a misdemeanor and upon conviction thereof shall be fined twenty-five dollars.

APPENDIX NO. 3.

AN ACT

To Provide for County Hospitals for the Care and Treatment of Inmates of County Infirmaries and Other Residents of the County Suffering From Tuberculosis in the State of Ohio.

OHIO.

AN ACT to provide for county hospitals for the care and treatment of inmates of county infirmaries and other residents of the county suffering from tuberculosis.

Be it enacted by the General Assembly of the State of Ohio:

SECTION 1. That on and after January 1, 1909, it shall be unlawful to keep any person suffering from pulmonary tuberculosis, commonly known as consumption, in any county infirmary except in separate buildings to be provided and used for that purpose only.

SEC. 2. The board of county commissioners are hereby authorized and directed to construct in each county a suitable building or buildings, which shall be separate and apart from the infirmary buildings, to be known as the county hospital for tuberculosis; and they shall also provide for the proper furnishing and equipment of said hospital; provided, that there is not already established a hospital in the county for treatment and maintenance of tuberculosis patients; and whenever in any county funds are not available to carry out the provisions of this act, the county commissioners shall levy for that purpose, and set aside the sum necessary, which shall not be used for any other purpose, and the commissioners of the county may issue and sell the bonds of said county in anticipation of said levy. The infirmary directors shall provide for the treatment, care and maintenance of patients received at said county hospital, and for necessary nurses and attendants, and all expenses so incurred shall be audited and paid as are other expenditures for county infirmary purposes. An accurate account shall be kept of all moneys received from patients or from other sources, which shall be applied towards the payment of maintaining said county hospital, and the infirmary directors shall have authority to receive for the use of such hospital gifts, legacies, demises or conveyances of property, real or personal, that may be made, given or granted to for the use of said county hospital, or in its name, or in the name of said directors.

SEC. 3. The commissioners and infirmary directors of any county, in lieu of providing for the erection of a county hospital for tuberculosis, may contract with the infirmary directors of any other county or with the board of public service of any municipality where such hospital has been constructed for the care and treatment of the inmates of such infirmary or other residents of the county who are suffering from pulmonary tuberculosis, and the infirmary directors of the county in which such patients reside shall pay into the poor fund of the county or into the proper fund of the city receiving such patients the actual cost incurred in their care and treatment and other

necessaries; and shall also pay for their transportation. The probate judge of any county in which such hospital has been provided may, upon a proper presentation of the facts and the recommendation of the State Board of Health, order any inmate of the infirmary who is suffering from pulmonary tuberculosis removed to the county hospital for tuberculosis of some other county, and there confined; provided, that such removal shall not be made without the consent of such inmate if a suitable place outside of the infirmary is provided for his or her care and treatment.

SEC. 4. The county hospital for tuberculosis shall be devoted to the care and treatment of those admitted to the county infirmary who are afflicted with pulmonary tuberculosis, and of other residents of the county who may be suffering from said disease and who are in need of proper care and treatment; and the board of infirmary directors shall investigate all applicants for admission to the county hospital for tuberculosis who are not inmates of the county infirmary and require satisfactory proof that they are in need of proper care, and have pulmonary tuberculosis; provided, that the infirmary directors may require from any such applicant admitted a payment of not to exceed $3.00 a week, or such less sum as they may determine, for hospital care and treatment. The physician to the county infirmary shall have the medical care of patients in the county hospital; provided, that any patient not an inmate of the county infirmary shall have the privilege of calling other medical attendance in consultation with the regular infirmary physician, but not at the expense of the county.

SEC. 5. The State Board of Health shall have general supervision of all county hospitals for tuberculosis, and shall prescribe, and is hereby authorized to enforce, such rules and regulations for their government, and for the protection from infection of other inmates of the county infirmary and of nurses and attendants in the county hospital for tuberculosis, and others, as they may deem necessary; and it shall be the duty of all persons in charge of or employed at such hospitals, or residents thereof, to faithfully obey and comply with any and all such rules and regulations; and said board, acting with the Board of State Charities, shall approve the location and plans for all county hospitals for tuberculosis.